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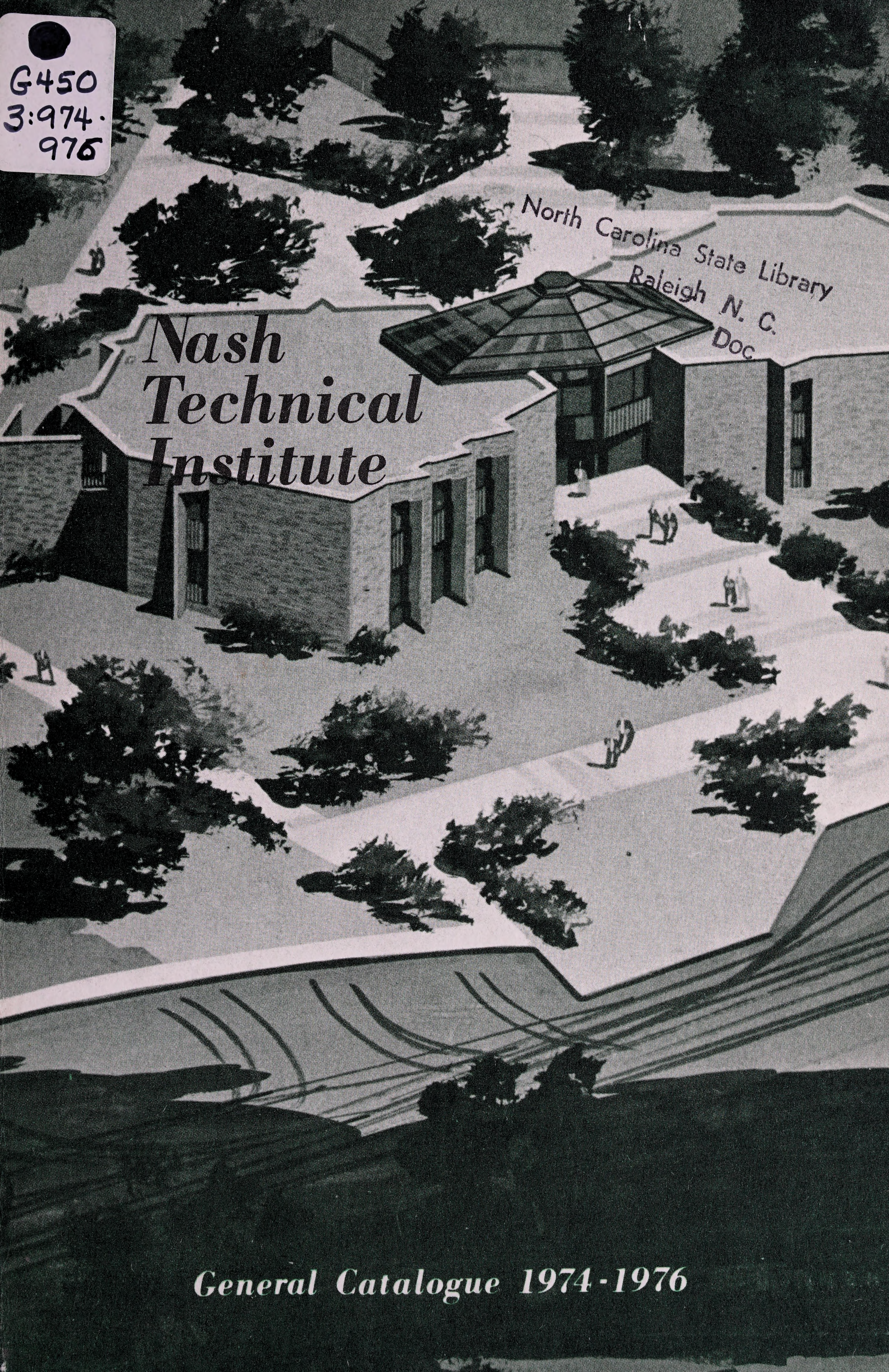
Nash Technical Institute



General Catalogue 1974-1976

PUBLISHED by

NASH TECHNICAL INSTITUTE
P.O. Box 2347
Rocky Mount, N. C. 27801

VISITORS

Visitors to the Institute are welcome. The Institute offices are open daily between the hours of 8:00 a.m. and 5:00 p.m. The information office is open from 7:00 p.m. until 10:00 p.m., Monday through Thursday. Appointments for interviews may be made by calling the Institute at (919) 443-4011 in Rocky Mount.

Nash Technical Institute

A UNIT OF THE
NORTH CAROLINA DEPARTMENT OF
COMMUNITY COLLEGES

Vocational-Technical Education
General Adult Education

GENERAL CATALOG
1974-1975
1975-1976

Post Office Box 2347
Rocky Mount, North Carolina 27801
Phone 443-4011

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Questions and Answers

WHO MAY ATTEND NASH TECHNICAL INSTITUTE?

Any person who is eighteen years old or older, or any person who is a high school graduate, will be admitted to a program suited to his interests and abilities.

WHAT TYPES OF PROGRAMS ARE OFFERED AT NASH TECHNICAL INSTITUTE?

Nash Technical Institute offers a variety of programs designed to meet a wide range of educational needs. These programs are classified as general education, technical, vocational, or adult education and extension.

WHAT IS THE GENERAL EDUCATION PROGRAM?

The general education program is a two-year Cooperative College Program in which a student may earn as much as sixty-four (64) semester hours of college credit. Courses successfully completed in the program carry full credit at North Carolina Wesleyan College and may be transferred to other four-year Colleges. Upon completion of the program, the student is awarded an Associate in Arts Degree.

WHAT ARE THE REQUIREMENTS FOR ADMISSION TO THE GENERAL EDUCATION PROGRAM?

A high school diploma or a high school equivalency certificate is required for admission to the general education program.

WHAT IS A TECHNICAL PROGRAM?

A technical program is a two-year program which prepares a student to work in a semi-skilled, professional, managerial, or highly skilled area. Upon completion of such a course, the student is awarded an Associate in Applied Science Degree.

WHAT ARE THE REQUIREMENTS FOR ADMISSION TO A TECHNICAL PROGRAM?

A high school diploma or a high school equivalency certificate is required for admission to a technical program. There may be minimum math and science requirements which vary with different programs.

CAN THESE COURSES BE TRANSFERRED TO OTHER INSTITUTIONS?

Yes, these courses can be transferred to other technical institutes or to community colleges. Some technical courses can be transferred to other institutions such as U.N.C.-Charlotte, E.C.U., or N.C. Wesleyan and applied to a four-year Bachelor of Technology Degree.

WHAT IS A VOCATIONAL PROGRAM?

A vocational program is a one-year program which prepares a student for a job which requires special skills. The emphasis in these programs is on developing the needed skills and gaining practical experience. Upon completion of such a course, the student is awarded a diploma.

WHAT ARE THE REQUIREMENTS FOR ADMISSION TO A VOCATIONAL PROGRAM?

High school graduation or the equivalent is normally required for admission; however, exceptions may be made in certain circumstances.

HOW LONG IS A VOCATIONAL PROGRAM?

Vocational programs vary in length from one to four quarters, depending on the program and the degree of skill required. Upon completion of a twelve months program, the student is awarded a North Carolina State Board of Education Diploma. For shorter programs, the student receives an Institute certificate.

WHAT IS THE ADULT EDUCATION PROGRAM?

The Adult Education Program consists of courses which are short in duration and terminal in nature. Some courses, however, are preparatory for curriculum programs or for other extension classes. For more detailed information, see the Adult Education section of this catalog.

WHAT DOES IT COST TO ATTEND NASH TECHNICAL INSTITUTE?

For a full-time student in the Cooperative College Program, tuition is $48.00 per quarter. For a full-time student in a technical or vocational program, tuition is $32.00 per quarter. Books and supplies average $45.00 per quarter. Part-time students pay according to the number of credit hours work they take. All full-time students pay an activity fee of $2.00 per quarter. Extension classes cost $2.00 each. Adult Basic Education classes are free.

WILL HIGH SCHOOL COURSES COUNT TOWARD DEGREE OR DIPLOMA PROGRAMS?

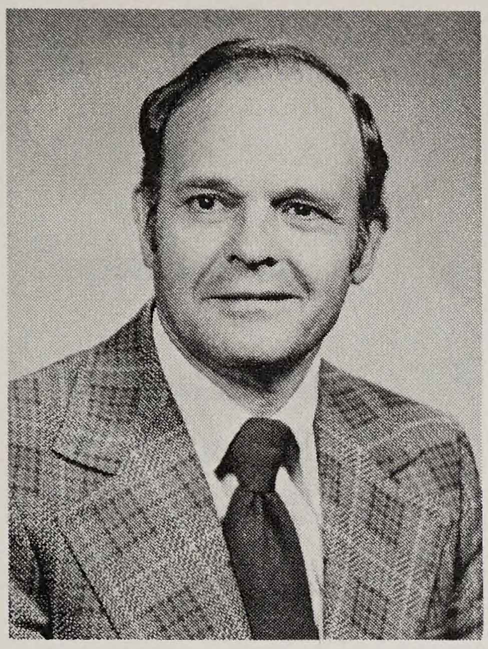
High school courses will be evaluated to determine whether they may be applied to a degree or diploma program at Nash Technical Institute.

WHAT IS THE FIRST STEP IN APPLYING FOR ADMISSION?

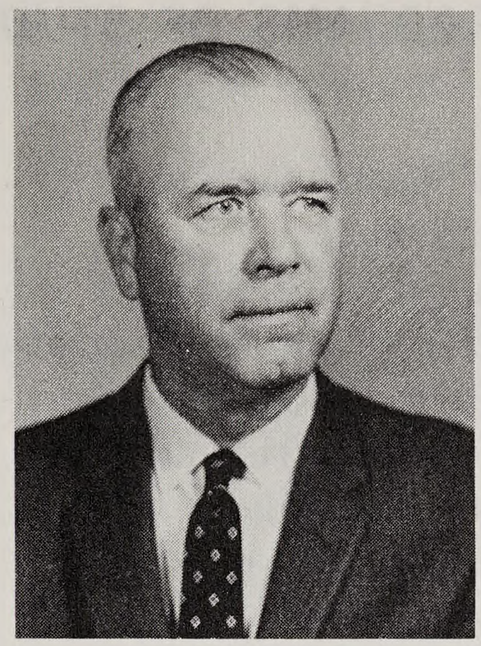
The first step in applying for admission to Nash Technical Institute is to secure the necessary application forms from the Student Personnel Office. This may be done by calling Rocky Mount 443-4011, or by writing to Nash Technical Institute, Box 2347, Rocky Mount, N. C. 27801.

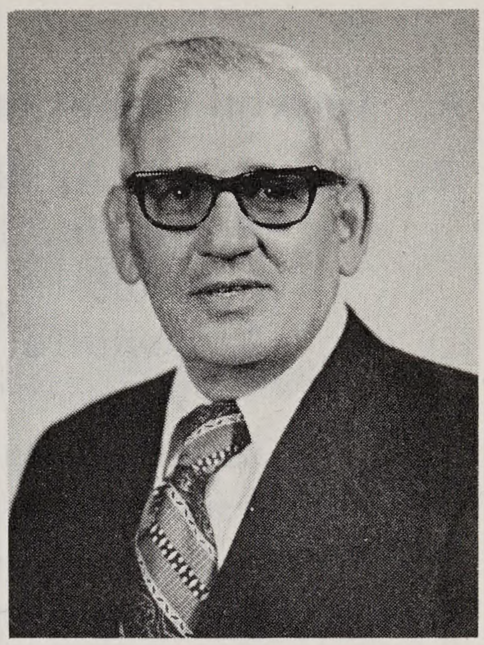
WHERE IS NASH TECHNICAL INSTITUTE LOCATED?

The Institute is presently located six miles west of Rocky Mount, one mile north of Highway 64, at the Red Oak exit. In the spring of 1975, the new location will be just south of Highway 64, at the Red Oak exit.


President

Jack D. Ballard


Chairman of
Board of Trustees
Julian B. Fenner


Vice Chairman

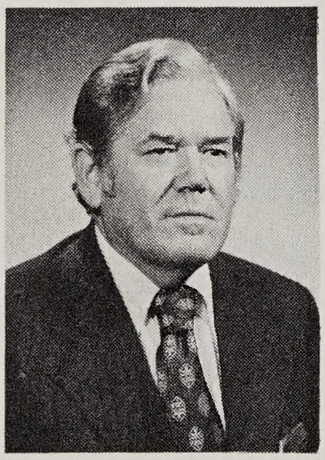
Danford E. Cutchin

The Institute Board of Trustees

Frank Balwin

Therman Edwards

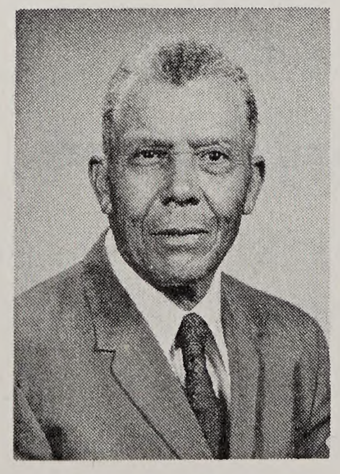
Warren Evans

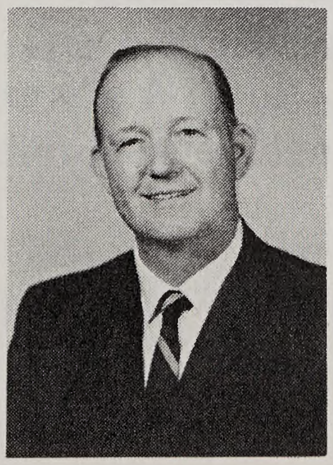

Claude Deans

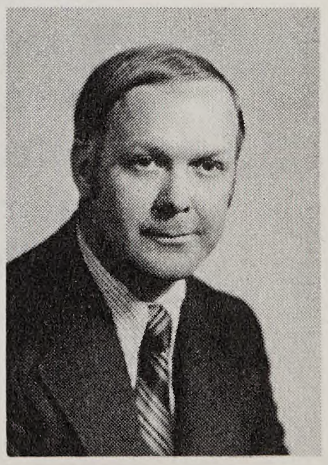
William F. Powell

Grace Ricks

Robert E. Siler


Orlando Stovall


Bart Strickland


Allen Sutphin

PROGRAMS OF STUDY

A. **General Education**

B. **Associate in Applied Science Degree**
- Accounting Technology
- Agricultural Business Technology
- Agricultural Science and Mechanization (Veterans' Farm Co-Op Program)
- Architectural Drafting Technology
- Associate Degree Nursing (LPN Option)
- Business Administration
- Drafting and Design—Mechanical
- General Office Technology
- Instrumentation Technology
- Executive Secretary Technology
- Legal Secretary Technology
- Medical Secretary Technology
- Transportation Maintenance

C. **Diploma Programs**
- Auto Body Repair
- Automotive Mechanic
- Building Trades—Drafting
- Cosmetology
- Electrical Installation and Maintenance
- Electronic Servicing
- Instrumentation Mechanic
- Licensed Practical Nurse Education
- Masonry
- Radio Broadcasting
- Welding

D. **Certificate Programs**
- Auto Body Repair
- Automotive Mechanic
- Building Trades—Drafting
- Clothing Construction
- Mechanical Drafting
- Nurses' Assistant
- Operating Room Assistant
- Professional Housekeeping and Child Care
- Tailoring
- Welding

CALENDAR 1974-1975

FALL QUARTER

September 9	Student Orientation, Day and Evening registration
September 10	Classes begin (Evening registration)
November 22, 25, 26	Final exams
November 27-29	Thanksgiving holidays
December 2	Fall Quarter reports due

WINTER QUARTER

December 2	Day and Evening registration
December 3	Classes begin (Evening registration)
December 20	Christmas holidays begin after last class —3:00 p.m.
January 6	Classes resume
February 28, March 3,4	Final exams
March 7	Winter Quarter reports due

SPRING QUARTER

March 5-7	Inservice training for Faculty and Staff
March 10	Day and Evening registration
March 11	Classes begin (Evening registration)
March 27	Easter holidays begin at 10:00 p.m.
April 1	Classes resume
May 26, 27, 28	Final exams
May 30	Graduation (Spring Quarter reports due)

SUMMER QUARTER

June 6	Day and Evening registration
June 9	Classes begin (Evening registration)
July 4	Holiday
July 7	Classes resume
August 21, 22, 25	Final exams
August 26	Summer Quarter reports due

CALENDAR 1975-1976

FALL QUARTER

September 8	Student Orientation, Day and Evening registration
September 9	Classes begin (Evening registration)
November 21, 24, 25	Final exams
November 26-28	Thanksgiving holidays
December 1	Fall Quarter reports due

WINTER QUARTER

December 1	Day and Evening registration
December 2	Classes begin (Evening registration)
December 19	Christmas holidays begin after last class —3:00 p.m.
January 5	Classes resume
February 26,27; March 1	Final exams
March 3	Winter Quarter reports due

SPRING QUARTER

March 2-5	Inservice training for Faculty and Staff
March 8	Day and Evening registration
March 9	Classes begin (Evening registration)
April 15	Easter holidays begin at 10:00 p.m.
April 20	Classes resume
May 24, 25, 26	Final exams
May 28	Graduation (Spring Quarter reports due)

SUMMER QUARTER

June 7	Day and Evening registration
June 8	Classes begin (Evening registration)
July 1	Fourth of July holidays begin at 10:00 p.m.
July 6	Classes resume
August 23, 24, 25	Final exams
August 27	Summer Quarter reports due

HISTORY

The development of Nash Technical Institute began a decade before its establishment in 1967 through the diligent planning of the Nash County Board of Education, the County Commissioners, the Nash County Industrial Development Commission and other influential people. Through the county's high school consolidation program, the Benvenue High School building was made available for use as a technical institute. This plan was approved by the State Board of Education, the North Carolina Department of Community Colleges, and the vast majority of the citizens of Nash County. Governor Dan K. Moore announced that Nash County had been approved by the Governor's State Advisory Budget Commission for a technical institute on August 8, 1967.

In October, 1967, an eight-member Board of Trustees was appointed jointly by the Nash County Board of Education and the Nash County Board of Commissioners. In December of the same year, these newly appointed trustees elected Jack D. Ballard to serve as President. Mr. Ballard began staffing, organizing the physical facilities, and planning the instructional program of the institute on January 2, 1968.

Nash Technical Institute operated in the Benvenue facility for only one school year. As a result of the Nash County Board of Education's having to reorganize to meet federal guidelines for integration, it became mandatory that Nash Technical Institute abandon the Benvenue facility and move six miles west of Rocky Mount to the former Stoney Creek elementary school building.

The Board of Trustees of Nash Technical Institute, in early 1972, purchased a 69-acre tract of land at the intersection of State Road 1603 and U.S. 64. The Nash County Board of Commissioners appropriated $500,000 and the State Board of Education appropriated $495,000. Subsequently an additional $202,000 was obtained from the Coastal Plains Regional Commission.

The firm of Leslie N. Boney, Jr., was commissioned by the Board of Trustees to develop the new campus. The first phase, consisting of two buildings with approximately 50,000 square feet, has been approved, contracts have been let, and construction has begun. Nash Technical Institute expects to occupy the first phase of the new campus in the spring of 1975.

STATEMENT OF PURPOSE

Nash Technical Institute exists for the purpose of providing, at minimal cost, comprehensive educational opportunities that meet the particular needs of the local adult population.

The objectives of this stated purpose are to provide:

1. Instruction which helps each student develop his potential.
2. Guidance, counseling, and placement into a program which will enable the student to meet with success.
3. A comprehensive curriculum that offers occupational (vocational and technical), academic (supplementing these), and community service educational opportunities.

These three objectives are achieved through the "open door policy" and through articulation with the existing educational structure and the business and industrial community.

ACCREDITATION

Department of Community Colleges

Nash Technical Institute is approved by the North Carolina State Department of Community Colleges under the State Board of Education, as specified in Chapter 115A of the General Statutes of North Carolina.

The Department of Community Colleges and the State Board of Education have granted the Institute Board of Trustees the authority to award the Associate in Applied Science Degree for the completion of all two-year technical curricula and to award the Diploma for all vocational curricula.

Regonal Accreditation

Nash Technical Institute has candidate status with the Southern Association of Colleges and Schools.

Nash Technical Institute is recognized by the U. S. Department of Education as being an institution of higher learning and qualified to receive Federal assistance in all of its higher education programs.

Nash Technical Institute is an institutional member of the American Association of Junior Colleges.

The programs at Nash Technical Institute are approved by the Veterans Administration.

BOARD OF TRUSTEES

Julian B. Fenner	Chairman
Danford E. Cutchin	Vice Chairman
Jack D. Ballard	Secretary

APPOINTED BY THE NASH COUNTY BOARD OF EDUCATION	TERM EXPIRES
Therman Edwards	June 30, 1977
Warren Evans	June 30, 1979
Julian B. Fenner	June 30, 1981
Claude E. Deans	June 30, 1975

APPOINTED BY NASH COUNTY COMMISSIONERS

Danford E. Cutchin	June 30, 1977
Robert E. Siler	June 30, 1981
Frank G. Baldwin	June 30, 1975
Orlando R. Stovall	June 30, 1979

APPOINTED BY THE GOVERNOR

Bart Strickland	June 30, 1979
Allen L. Sutphin	June 30, 1977
William F. Powell	June 30, 1975
Grace E. Ricks	June 30, 1981

THE NASH COUNTY BOARD OF EDUCATION

Warren Evans, Chairman
Faye J. Gardner
Edward L. Brady
Richard Cooper, Jr.
John P. Morgan

ADMINISTRATIVE STAFF

Jack D. Ballard .... President

B.S., Political Science, Lenoir Rhyne College; M.Ed., University of North Carolina, Greensboro; Post Graduate study at Wake Forest University, New York University, Duke University, and Oregon State University; Doctoral study at North Carolina State University at Raleigh.

George T. Brodie .... Evening Director

B.S., Chemistry, St. Augustine's College; Graduate study in adult education at North Carolina State University at Raleigh.

Ronald E. Capps .... Dean of Instruction

B.S., Industrial Arts, East Carolina University; M.A., High School Administration and Industrial Arts, East Carolina University; Doctoral study at University of Georgia.

Kennon E. Jackson .... Director of General Adult Education

B.S., History, Campbell College; M.Ed., University of North Carolina at Chapel Hill; Doctoral study at North Carolina State University at Raleigh.

John D. Moore .... Dean of Student Personnel

A.B., English, University of North Carolina at Chapel Hill; M.Ed., Guidance, North Carolina State University at Raleigh; Ed.D., Adult and Community College Administration, North Carolina State University at Raleigh.

Charles E. Taylor, Jr. .... Business Manager

B.S., Business Administration, East Carolina University; Graduate study at East Carolina University.

W. Frank Wright .... Administrative Assistant

B.S., Vocational Agriculture, A&T State University; Graduate study in adult education at Cornell University and North Carolina State University at Raleigh.

FACULTY

Letha Alsup .... Sewing

Twelve years experience as sewing instructor for the Singer Company; five years teaching experience.

Donald B. Barnes .... English

B.A., English, M.A., English, Duke University; Post graduate study at North Carolina State University at Raleigh.

William R. Barnes .... Drafting

Twenty-two years experience in Drafting and Design; three years teaching experience.

Carolyn F. Brinkley .... Secretarial Science

A.A., Secretarial Administration, Chowan College; B.S., Business Education, Atlantic Christian College.

Rosa A. Brodie .... Science, Math

B.S., Science, St. Augustine College; M.S., Science, Howard University; Post graduate study at North Carolina State University at Raleigh.

Elizabeth Bunn .... Nursing

BSN, Duke University School of Nursing; Graduate study in medical nursing at Duke University.

Mary Helen Casey .... Secretarial Science

B.S., Business Education, East Carolina University; Graduate study at East Carolina University and North Carolina State University at Raleigh.

Shirlin Gaile Davenport .... Learning Lab Coordinator

B.A., Sociology, North Carolina State University at Raleigh.

Ennis L. Edwards .... Nursing

RN, Park View Hospital School of Nursing.

Lynette Finch .... Librarian

B.S., Library Science, East Carolina University; M.A.Ed., Library Science, East Carolina University; Post graduate study at North Carolina State University at Raleigh.

Rubye M. Fries .... Guidance Counselor

B.S., Home Economics, Meredith College; M.A., Guidance, East Carolina University; Post graduate study at North Carolina State University at Raleigh.

George Hawkins, Jr. .... Engineering Technology

B.S., Engineering, North Carolina State University, M.S., Engineering, North Carolina State University, Graduate study at Penn State University.

John D. Knight .... Guidance Counselor

B.S., Elementary Education, Elibabeth City State Teachers College; Principal's Certificate, North Carolina Central University; M.A., Guidance and Counseling, New York University; Post graduate study at A&T State University and East Carolina University.

Grady E. Love, Jr. .... Automotive Mechanics

B.A., Economics, Guilford College; Graduate study at North Carolina State University at Raleigh.

Merritt A. Matthews .... Automotive Mechanics

Eight years experience as automotive mechanic; Delco Remy Electrical School; Other industry sponsored schools; Eight years teaching.

John A. Noble .... Auto Body Repair

Thirteen years experience as automotive mechanic; Numerous industry sponsored clinics; Six years teaching experience.

Nancy S. Penick ....Learning Lab Coordinator
B.Mus., Converse College; Graduate study in Education at East Carolina University and North Carolina Wesleyan College.

Hiram Perkinson III ....Manpower Development
A.B., Social Science, Atlantic Christian College; M.Ed., Adult Education, North Carolina State University at Raleigh.

Peter P. Resta ....Chairman, Engineering Technology
B.S., Electronics, Drexel Institute of Technology; M.S., Electrical Engineering, Southern Methodist University.

Pravin Shukla ....Chairman, Business Department
B.A., Economics, Bombay University; Bachelor of Law, Gujarat University; M.A., Business Economics, Appalachian State University.

Margaret T. Strickland ....Math, Accounting
B.S., Math, Atlantic Christian College; M.A., Math, East Carolina University; Post graduate study at North Carolina State University at Raleigh and Southern Methodist University.

Carol B. Taylor ....Secretarial Science
B.S.S.A., Secretarial Administration, University of North Carolina at Greensboro.

Roy Walston ....Director of Special Programs
B.S., Health and Physical Education, East Carolina University; Graduate study at East Carolina University.

OFFICE STAFF

Dorothy H. Woodall	Bookkeeper
Lena Battle	Secretary to Director of General Adult Education
Sadie Bone	Cashier, Business Office
Dorothy Byrd DeHaven	Secretary to Dean of Instruction
Nancy E. Jackson	Secretary to Director of Manpower Development
McKinley Davis	Veterans Coordinator
Anne Gregg	Secretary/Registrar
Mary Ruth Scott	Secretary to Dean of Student Personnel
Roberta Nihart	Secretary to Business Manager
Joyce W. Pigford	Secretary to the President

MAINTENANCE STAFF

Marcilus Gilliam Ethel Gilliam

Admissions

ADMISSIONS

ADMISSION REQUIREMENTS

Nash Technical Institute operates under the "open door" policy as set forth by the North Carolina Department of Community Colleges and the State Board of Education. Specifically, the State Board recommends that all technical institutes and community colleges shall maintain an open door policy for all applicants who are high school graduates or high school leavers eighteen years of age or older. Institutes reserve the right to selectively place these applicants.

ADMISSION PROCEDURE

Persons who wish to apply for admission to a curriculum program at Nash Technical Institute should contact the Student Personnel Office for the necessary forms, testing dates, and interview appointments. The following are required for admission to all curriculum programs:

1. A completed application form.
2. A high school transcript or a copy of GED scores for all programs.
3. A completed health questionnaire.
4. A conference with a member of the Student Personnel staff for the purpose of selecting a program of study in keeping with the interests and abilities of the student.
5. Completion of institutional tests as requested.

ADMISSION TO ELECTRONICS TECHNOLOGY AND ARCHITECTURAL DRAFTING

Applicants for these programs should have completed one unit in algebra and one unit in plane geometry or the equivalent in modern mathematics. The Institute may waive the math requirement if a student demonstrates satisfactory aptitude or proficiency in this area.

ADMISSION TO PRACTICAL NURSE EDUCATION

Applicants for the Practical Nurse Education program must, in addition to the general procedures above, satisfy the following requirements:

1. A health certificate signed by a doctor and a dental examination record signed by a dentist.
2. Three letters of recommendation.
3. A personal interview with the Director of the Practical Nurse Education program.

ADMISSION TO EVENING PROGRAMS

The admission procedures for full-time day curricula are also applicable for admission to evening curriculum programs.

ADMISSION TO ADULT EDUCATION AND EXTENSION PROGRAMS

Admission to classes in these areas is determined by the individual course offerings.

TRANSFER ADMISSION

Nash Technical Institute will accept transfer students from other institutes or colleges provided that such students complete the required admission procedures and provide a transcript from the institution(s) previously attended. All work completed at the former institution(s) will be evaluated and, where applicable, will be applied toward meeting the requirements of a diploma or degree program at this institution.

AUDITING COURSES

Students who wish to audit courses must register in the same manner as regular students. Auditors receive no credit or grades; however, they are permitted to attend class, participate in all class activities, and take examinations.

ADMINISTRATIVE OFFICE HOURS

The regular office hours of Nash Technical Institute are:

8:00 a.m.- 5:00 p.m. Monday through Friday
7:00 p.m.-10:00 p.m. Monday through Thursday

TUITION AND FEES

Nash Technical Institute receives financial support from local, State, and Federal sources, allowing students an educational opportunity at minimal cost. Tuition fees are set by the State Board of Education and are subject to change without notification. The cost of textbooks, laboratory fees, and supplies are additional expenses which vary according to the program of study. The payment of all fees is required at the time of registration. Students who cannot pay their fees at this time should see the Financial Aid Officer in the Student Personnel Office.

FULL-TIME STUDENTS

All students in the Cooperative College Program who are enrolled for nine (9) or more semester hours are charged a maximum of $48.00 per semester.

All vocational, technical, and audit students who are enrolled for twelve (12) or more quarter hours are charged a maximum of $32.00 per quarter.

PART-TIME STUDENTS

Cooperative College Program students who are enrolled for less than nine (9) semester hours are charged $3.75 times the number of semester hours for which they are enrolled. Example: 6 credit hours x $3.75 = $22.50.

Vocational, technical, and audit students who are enrolled for less than twelve (12) quarter hours are charged $2.50 times the number of quarter hours for which they are enrolled. Example: 9 credit hours x $2.50 = $22.50.

TUITION FOR OUT-OF-STATE STUDENTS

Any student whose legal residence is outside of North Carolina, or any student who is boarding or living with relatives in the community and whose parents are living outside the State, shall pay tuition fees as follows: $550 per school year of twelve months, or $137.50 per quarter, or, if a part-time student, $11.45 per quarter hour credit.

TEXTBOOKS AND SUPPLIES

The cost of textbooks and supplies will vary according to the program of study, but will average about $45.00 per quarter for full-time students. These items may be purchased from the school bookstore.

ACCIDENT INSURANCE

Accident insurance covering hours in school and transportation to and from school is available for about $3.00 per year. This insurance is strongly recommended, though not required.

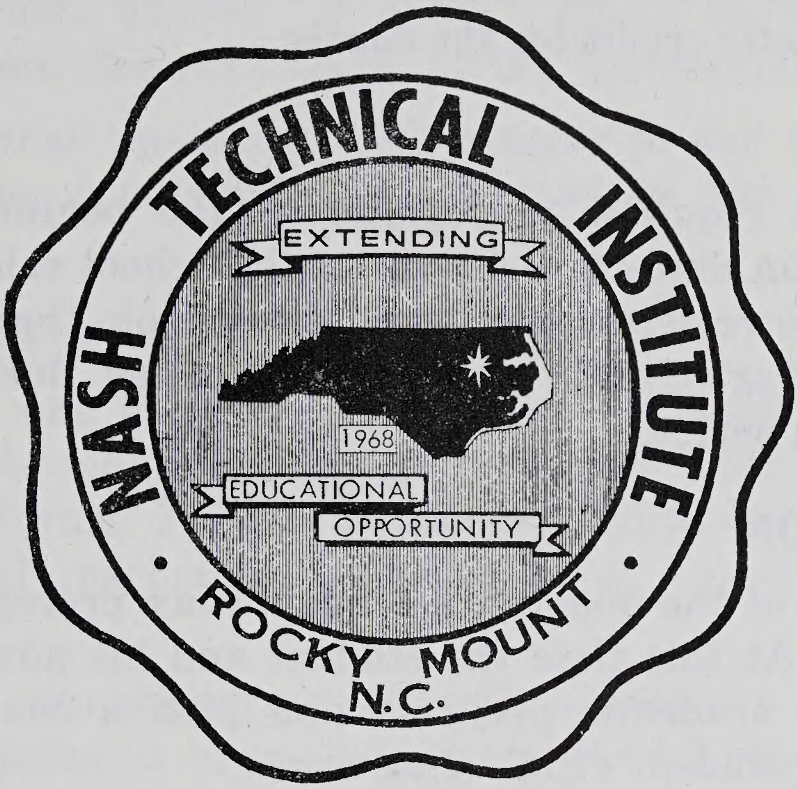
REFUND POLICY

In accordance with the State Board of Education policy, tuition refunds for students shall not be made unless the student is, in the judgement of the Institution, compelled to withdraw for unavoidable reasons. In such cases, two-thirds of the student's tuition may be refunded if the student withdraws within ten calendar days after the first day of classes as published in the school calendar. Tuition refunds will not be considered after that time. Tuition refunds will not be considered for tuitions of $5.00 or less, unless a course or curriculum fails to materialize. EXCEPTION: Those students who are veterans or war orphans receiving benefits under U. S. Code, Title 38, Chapters 33 and 35, may be refunded the pro rata portion of the tuition fees not used at the time of withdrawal of such students.

In all cases, the student must initiate his withdrawal through the Student Personnel Office. The Business Office will make the allowable refund only after written request is received from the Student Personnel Office.

STUDENT ACTIVITY FEE

Each full-time student pays an activity fee of $2.00 per quarter which entitles him to participate in all parties, cook-outs, and other student activities during the quarter. Part-time students may elect to pay this fee and participate in the activities.



Academic Regulations

ACADEMIC REGULATIONS

QUARTER SYSTEM

Nash Technical Institute operates on the quarter system. Quarters are normally eleven weeks long. Classes are in session five days per week. The number of hours that a class meets each week is determined by the number of hours credit for the course.

REGISTRATION

All students are required to register at the beginning of each quarter. Registration dates are shown on the school calendar in this catalog. A permit to register must be obtained from the Student Personnel Office and registration must be completed during the prescribed registration period.

PREREGISTRATION

Prior to the end of the quarter, a student may preregister for the following quarter. At this time the student and his advisor may review the student's academic progress and plan a course of study which will meet the student's individual needs.

Only those students currently enrolled are allowed to preregister. Those students who fail to preregister at the designated time must register on registration day.

LATE REGISTRATION

A student may register late provided that:

1. The desired classes are not filled.
2. The student was pre-advised or otherwise fully admissible to the course for which he wishes to register.
3. The student gives conclusive evidence that it was impossible for him to register at the appointed time, or that it would have involved extreme hardship.

Negative decisions may be appealed to the Director of Student Personnel.

CLASS HOURS

Nash Technical Institute offers curriculum credit classes between the hours of 8:00 a.m. and 10:00 p.m. five days per week except on Friday when classes end at 4:00 p.m.

Non-credit courses for personal, occupational, and community improvement are also offered during both day and evening hours.

DROPPING AND/OR ADDING COURSES

If a student finds it necessary to make adjustments in his schedule, he should confer with his instructor and advisor.

No course may be added after one week of classes (5 school days) during a regular quarter, or after 3 school days during a summer quarter. No course may be dropped after two weeks (10 school days) during a regular quarter, or after 5 school days during a summer session, without the permission of the instructor.

To insure that the student will receive proper credit, a Drop/Add form must be completed and returned to the Student Personnel Office.

WITHDRAWALS

A student who finds it necessary to withdraw from the Institute must do so through the Student Personnel Office by completing the appropriate forms. Failure to properly withdraw will result in loss of credit and inaccurate information of the student's permanent record.

A student who withdraws officially before the end of the quarter in which a course is normally completed will receive no grades. His record will show *no credit* (NC) and the date of withdrawal.

A student may not officially withdraw from a course after the seventh week except in emergency situations.

COURSE LOAD

The normal course load for a full-time vocational or technical student is 15 to 18 quarter hours. The normal course load for a Cooperative College Program student is 12 to 15 semester hours.

Students who are employed may wish to carry a reduced load.

AUDITING COURSES

A student who wishes to audit courses will receive no credit for such courses. However, he will be permitted to attend class, participate in all class activities, and take the examinations.

STUDENT CLASSIFICATION

FRESHMAN	A student who has earned fewer than 48 quarter hours in a vocational or technical program, or a student who has earned fewer than 32 semester hours in the Cooperative College Program.

SOPHOMORE	A student who has earned more than 48 quarter hours in a vocational or technical program, or a student who has earned more than 32 semester hours in the Cooperative College Program.
FULL-TIME STUDENT	A student who is registered for 12 or more quarter hours in a vocational or technical program, or a student who is registered for 9 or more semester hours in the Cooperative College Program.
PART-TIME STUDENT	A student who is registered for less than 12 quarter hours or less than 9 semester hours.
SPECIAL STUDENT	A student who is registered to take certain credit classes offered by the institution, but who does not at present plan to complete a curriculum. Such a student pays the regular tuition and fees. Credit earned will be applied toward meeting the requirements of a curriculum program should the student decide at a later date to complete a given curriculum.

ATTENDANCE POLICY

It is the belief of Nash Technical Institute that regular class attendance is essential to good scholarship. Since all students are adults with many responsibilities, an occasional absence may be unavoidable; however, such an absence in no way lessens the student's responsibility for meeting the requirements of the class.

The following policy concerning class absence has been adopted.

A student who accumulates five (5) unexcused absences in any class will be dropped from the class roll and will receive a grade of NC (no credit) on the course. Three tardies equal one unexcused absence.

If a student feels that the absence should be excused, the instructor shall reserve the right to request a written explanation for the absence. The instructor shall then determine whether the absence will be excused.

This policy shall apply to all full-time and part-time students who are enrolled for any course of instruction at Nash Technical Institute.

Veterans are reminded that if removal from class rolls results in fewer hours than the number for which they were originally enrolled, this could cause a reduction in VA benefits and possibly require a partial return of past payments.

GRADING SYSTEM

The following grading system is used by Nash Technical Institute.

Letter	Numerical Equivalent	Quality Points per Quarter Hour
A	93-100	4
B	85-92	3
C	77-84	2
D	70-76	1
NC	Below 70	0
W	Withdraw	See explanation
I	Incomplete	"
Aud	Audit	"
-(Z)	Credit by proficiency examination	"
-(T)	Transfer credit	"

EXPLANATION OF GRADES

NC—No Credit

NC denotes an unofficial withdrawal from a class. In order to remove an NC, the student must re-enroll and satisfactorily complete the course.

If a course on which a student receives an NC is not offered during the remainder of the student's residence, an equivalent course may be substituted for the purpose of removing the NC and meeting the program requirements. Such a substitution requires the recommendation of the department chairman and the appropriate dean.

W—Withdrew

W denotes withdrawal from a course during the school term. This indicates that the student will receive no grade and no credit for the course. The student must officially withdraw from the course in order for a *W* to be recorded.

I—INCOMPLETE

I denotes no grade and no quality points because of incomplete work. The student must complete the required work and remove the *I* from his record during the next quarter of attendance or within a period of one year; otherwise the *I* automatically becomes a *no credit* (NC).

AUD—AUDIT

Audit denotes no grade and no quality points for an audited course.

-(Z)—CREDIT BY PROFICIENCY EXAMINATION

(Z) preceded by a letter grade denotes credit by proficiency examination. A student may earn credit for a given course by examination if he can demonstrate the required level of proficiency acquired as a result of previous study and/or experience. This credit will be based on a departmental examination given with the permission of the student's advisor and the instructor concerned. Proficiency examinations will not be allowed after the end of the drop/add period.

-(T)—TRANSFER CREDIT

(T) preceded by a letter grade denotes transfer credit. A student may be admitted to Nash Technical Institute with advanced standing on the basis of credit earned in other post-secondary institutions. The student must file a transcript of all such credit for evaluation. Grades for all courses which are accepted will be recorded at face value. A grade of *D,* if accepted, will count for hours but not for quality points.

ACADEMIC PROBATION

A student who receives two NC's in one quarter or two NC's over a period of two quarters will be placed on academic probation and required to take less than a full load for one quarter. If no additional NC's are made during the probation quarter, the student will be allowed to resume a full load. However, if additional NC's are made, the student will remain on probation.

REPEATING COURSE WORK

Any course may be repeated. No course may be counted more than once in calculating the total number of hours credit toward graduation. Any required course in which a grade of NC or W is received *must* be repeated. A course that is not required may be repeated. Should a student repeat and satisfactorily complete a course, the higher grade earned will be used in calculating his quality point average.

GRADE REPORTS

Grades for all courses taken during a quarter are mailed to the student as soon as possible after the end of the quarter.

SCHOLASTIC HONORS

Dean's List: To qualify for the Dean's List, a full-time student must make a grade of *A* on all courses taken.

Honor Roll: To qualify for the Honor Roll, a full-time student must make an average of *B* on all courses, and must have no grade lower than *C*.

TRANSFER OF CREDIT

TRANSFER OF CREDIT BETWEEN INSTITUTIONS

Educational work done in other institutions may, where applicable, be credited toward the requirements of a degree, diploma, or certificate program at Nash Technical Institute. The student is expected to file a transcript of all previous post-secondary work. A minimum of twenty (20) semester hours or thirty (30) quarter hours in residence is required for graduation from Nash Technical Institute. The student must complete his final quarter or semester at Nash Technical Institute.

Transfer credit from any institution in the North Carolina Department of Community Colleges will be accepted. Credit toward the Cooperative College Program, as well as technical and vocational programs, may be accepted at the discretion of the Institute. Records of prior work will be evaluated and final acceptance or rejection of transfer credit lies with the Institute.

Credit may be allowed for up to thirty (30) quarter hours of work based on the General Examination of the College Level Examination Program. Credit for USAFI courses and for service school training may be granted where appropriate to the student's curriculum and where a comparable course is offered by Nash Technical Institute. Service school training will be evaluated on the basis of a *Guide to the Evaluation of Educational Experiences in the Armed Service* published by the American Council on Education. USAFI courses will be evaluated on the basis of the current catalog of the United States Armed Forces Institute. Final acceptance or rejection of any credit lies with Nash Technical Institute.

Credit earned at Nash Technical Institute may be transferred to similar programs at the other institutions in the Department of Community Colleges in North Carolina. Credit earned in the Cooperative College Program may be transferred to most four-year colleges and universities. Acceptibility of any transfer credit is determined by the institution to which the student wishes to transfer.

TRANSFER OF CREDIT BETWEEN PROGRAMS

Credit earned in any degree program may be applied to a different degree or diploma program upon evaluation by the Student Personnel Office. Credit earned in a diploma program is not acceptable for transfer to a degree program but may be applied toward a second major.

SECOND MAJORS

A student may receive a second major in his program of study by meeting additional requirements for the major. Credits already earned will be recognized if they meet the criteria established in the section on transfer of credit between programs.

CHANGE IN MAJOR PROGRAM OF STUDY

A student who wishes to change his major program of study must schedule a conference with a member of the Student Personnel Staff. The appropriate request form must be completed and returned to the Student Personnel Office.

CHANGE OF NAME AND/OR ADDRESS

A student is responsible for notifying the Student Personnel Office of all name and address changes. This is necessary in order to maintain accurate records.

TRANSCRIPTS

A student may obtain transcripts free of charge upon completion of a program or upon application for employment.

CHANGES IN REGULATION

Nash Technical Institute reserves the right to make changes in regulations, courses, fees, and matters of policy or procedures as deemed necessary without notification.

GRADUATION REQUIREMENTS

The following general requirements apply to all programs; however, there may be additional departmental requirements.

1. All financial obligations must be met.
2. All required courses must be completed with an earned quality point average of 2.00 overall, as well as 2.00 in the major area.
3. A minimum of thirty (30) quarter hours or twenty (20) semester hours must be earned at Nash Technical Institute. The final quarter or semester must be completed in residence.
4. Application for graduation and payment of graduation fees must be made three months prior to graduation.

QUALITY POINT AVERAGE

The earned quality point average is calculated by dividing the total number of quality points earned by the total number of quarter or semester hours successfully completed. On the 4.00 quality point system, a 2.00 is a *C* average.

DEGREES, DIPLOMAS, AND CERTIFICATES GRANTED

Upon the recommendation of the faculty and the approval of the Board of Trustees, the appropriate degree, diploma, or certificate will be awarded to the student who has successfully completed the curriculum in which he is enrolled.

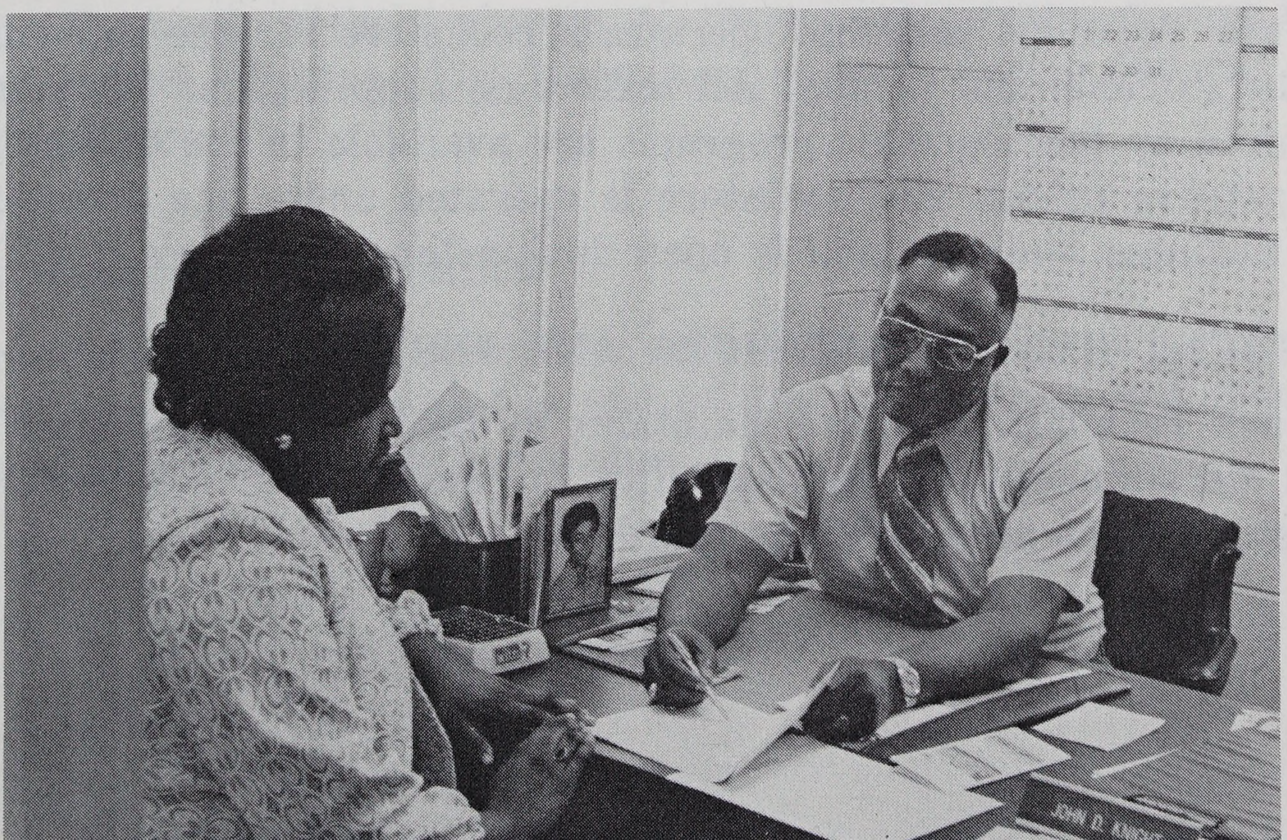
The Associate in Arts Degree is granted to the student who has earned sixty-four (64) semester hours of credit in the Cooperative College Program.

The Associate in Applied Science Degree is granted to the graduate of a two-year technical program.

A diploma is awarded to the graduate of a one-year vocational program.

A certificate is awarded to the student who has completed a program of less than one year's duration, or a program whose content is less than the full curriculum.

Student Services and Activities



STUDENT SERVICES

COUNSELING SERVICE

The Student Personnel Services include counseling service provided by trained personnel. These services are available to all students without charge from the pre-admission conference through graduation and job placement.

In addition, each student is assigned to a faculty advisor who will assist the student with specific course planning and registration.

Students may come to the counselors at any time to discuss educational, vocational, or personal concerns which might affect satisfactory school progress.

PLACEMENT SERVICE

Nash Technical Institute provides a job placement service for all students who successfully complete their course of study. The student Personnel Office maintains a current file of prospective employers and provides these employers with personal data sheets on students who meet the job demands.

HOUSING

Nash Techinical Institute does not provide housing for students either on or off campus, but will, when possible, assist a student in securing suitable housing.

FOOD SERVICE

Nash Technical Institute provides vending machines which dispense soft drinks and a variety of snacks. No cafeteria is maintained on campus.

BOOKSTORE

Nash Technical Institute operates a bookstore for the convenience of the students and faculty. All textbooks, supplies, and instruments required by the academic programs are available in the bookstore at competitive prices. The bookstore is operated under the direction of the Business Manager and is open during the school day.

STUDENT HEALTH SERVICES AND INSURANCE

Nash Technical Institute maintains no health facilities other than first aid supplies. The responsibility for medical services rests with the student and his parents or guardian.

The Institute has made arrangements with a local physician to take emergency calls. Emergency facilities are also available at Nash General Hospital.

Student accident insurance is available at a cost of $3.00 per year.

ORIENTATION

All new students are required to participate in the orientation program, which is scheduled one day before registration for the fall quarter. This program is designed to make the student aware of the services and facilities offered by Nash Technical Institute.

LIBRARY

The library at Nash Technical Institute houses a continually growing collection of educational media and materials which have been selected to enrich all programs offered by the Institute. It provides facilities for research, study, and reading to supplement class instruction. It also serves the avocational interests of students, faculty, staff, and the community at large. The library is open during the day and evening hours.

LEARNING LABORATORY

The learning laboratory at Nash Technical Institute houses a large assortment of self-instructional materials for those who wish to study independently. Areas of study include preparation for the high school equivalency tests, college preparation, up-grading of background in specific areas, and personal interest topics.

The laboratory is available at no expense to anyone who wishes to use the facility. The G.E.D. (High School Equivalency) Test is given by appointment, without charge, to those persons who do not have a high school diploma. The laboratory is open during the day and evening hours.

GRADUATION EXERCISES

Graduation exercises are held once each year for all programs. A graduation fee covering the cost of diploma and cap and gown is assessed each student who graduates.

CLASS RINGS, INVITATIONS, CAPS AND GOWNS

All orders for class rings, invitations, and caps and gowns are placed through the Student Personnel Office. Notices will be posted relevant to dates for measurements, and for placement of orders.

FINANCIAL AID

Financial aid is based upon financial need. When the amount that a student and his parents can contribute toward a student's educational expense is less than the actual cost of attending an educational institution, then financial need is said to exist. A student having financial need may apply for four principal kinds of financial aid: (1) Scholarships, which are usually gifts of money that do not have to be repaid and which are usually awarded on the basis of aptitude test scores, secondary school record, and financial need; (2) Grants, which do not have to be repaid but which are usually awarded more on the basis of financial need than high academic aptitude; (3) Loans, which must be repaid to the source, usually on a long-term basis following graduation; and (4) part-time employment. One or more of these four kinds of financial aid will usually be offered a needy student.

Specific programs of financial aid available to students of Nash Technical Institute include the following:

National Association for Practical Nurse Education & Service, Inc., Scholarships—A limited number of scholarships in the amounts of $250 to $275 are awarded annually to students enrolled in licensed practical nursing programs. These scholarships are based on academic promise, need, and recommendations.

Basic Educational Opportunity Grant Program—BEOG grants up to $1,400 minus the amount a student and his family are expected to contribute toward the cost of his education are available to students who have not attended a college, university, or post-high school vocational or technical school at any time before July 1, 1973.

Supplemental Educational Opportunity Grant Program—SEOG grants, which may not exceed the lesser of $1,500 or one-half the total amount of student aid provided by the institution and any state or private grant, are available to a limited number of undergraduate students with "exceptional" financial need.

Federally Insured Student Loan Program—A student in technical institutes and community colleges may borrow up to $2,500 a year from a bank or other financial institution if he can demonstrate financial need. Repayment of principal and interest at the rate of seven percent begins when a student terminates a course of study.

James E. & Mary Z. Bryan Foundation, Inc., Student Loan Program—Residents of North Carolina enrolled full-time in undergraduate programs may borrow up to $1,500 per academic year. The interest rate is one percent during the in-school period, and six percent during the repayment period. Repayment begins four months after the student leaves school as a full-time student.

Nash Tech Emergency Loan Fund—Short-term emergency loans not to exceed the cost of tuition, books, and fees are available to students who demonstrate unexpected financial need.

College Work Study Program—Students who demonstrate financial need may work up to 15 hours per week while attending classes and may work full-time during the summer or other vacation periods when they do not have classes. Students are paid the existing federal minimum hourly wage rate.

Veterans' Benefits—The Veterans' Benefits Law provides financial assistance, up to 36 months, to any veteran who is eligible for benefits under the G. I. Bill. When a veteran enrolls in any approved course, he must pursue the exact curriculum listed in the school catalog and must maintain satisfactory academic progress, attendance, and conduct in order to remain eligible for payments.

The Veterans Administration also offers educational assistance, up to 36 months, for sons and daughters of certain deceased or totally and permanently disabled veterans, generally between 18 and 23 years of age. A full-time Veterans Coordinator is available in the Student Personnel Office to assist students who are eligible for VA benefits.

Social Security Benefits—Sons and daughters of retired, disabled, or deceased workers are eligible for social security benefits up to the age of twenty-two while they are in post-secondary institutions, if they are unmarried, full-time students. Students should contact their local Social Security Office for further information.

Vocational Rehabilitation—By Act of Congress, any physically handicapped student may be eligible for scholarship assistance under the provision of Public Law 565. Applications for this scholarship aid should be processed through the District Vocational Rehabilitation Office nearest the student.

Students desiring to apply for financial aid should complete a financial aid application at the earliest possible date. Application forms may be obtained by writing to the Dean of Student Personnel, Nash Technical Institute, P.O. Box 2347, Rocky Mount, N. C. 27801.

VETERANS' AFFAIRS

A full-time Veterans' Coordinator is available to assist veterans who wish to attend school under the G. I. Bill. Veterans, or children of deceased veterans, should apply for educational assistance through the office of the Veterans' Coordinator or through the Student Personnel Office.

Veterans enrolled for the first time in a full-time program may be eligible for a work-study allowance. The veteran student must agree to perform 100 hours of service at the maximum payable allowance of $250.00. Disabled veterans will be given preference for the work-study allowance. Veterans with an academic deficiency may also apply for tutorial assistance.

It is the responsibility of all veteran students to contact the Veterans' Coordinator when there is any change in their educational status at Nash Technical Institute.

STUDENT ACTIVITIES

Student activities are a part of the cultural pattern of student life, as are class activities, and constitute experience which contributes to the total educational program of the student. With this philosophy in mind, the school attempts to maintain a proper balance between the curricular and co-curricular aspects of campus life.

The school is also dedicated to the premise that each student is an individual with a unique combination of needs, goals, aptitudes, abilities, and interests. To meet the demands of such a premise, varied programs are planned throughout the school year in an attempt to fulfill the social, cultural, and intellectual needs of each student.

STUDENT GOVERNMENT ASSOCIATION

Students gain practical experience in responsible citizenship through participation in a program of self-government. The Student Government Association is composed of all full-time students who are enrolled at Nash Technical Institute. Part-time students who elect to pay the student activity fee may also be members of the Association. Officers are elected each year and each class is represented in the Student Government Association.

STUDENT PUBLICATIONS

The school newspaper, *The Technica,* is published by and for the students at regular intervals.

The *Student Handbook* is published annually under the sponsorship of the Student Government Association.

Consideration is being given to the publication of a year book. Students who are interested in any aspect of such a publication are invited to participate.

SOCIAL LIFE

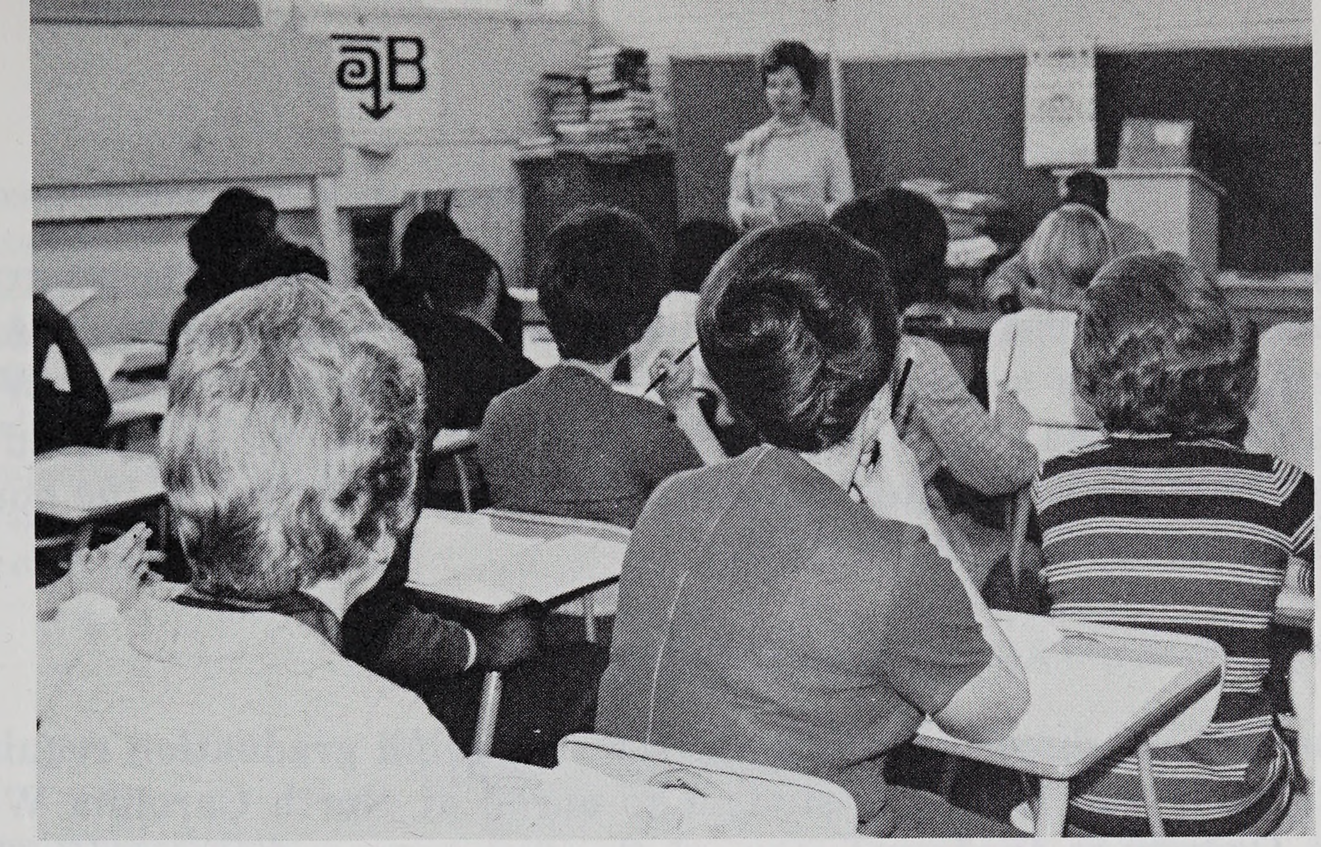
A series of cook-outs, dances, and other social affairs is provided throughout the year for the social, cultural, and educational enrichment of the students. All students who pay the student activity fee are eligible to attend these activities sponsored by the Institute.

STUDENT CONDUCT

Students at Nash Technical Institute are expected to conduct themselves as ladies and gentlemen in accordance with generally accepted standards of morality and decency at all times. The Institute is in accordance with Federal, State, and local statutes and will cooperate with the respective law enforcement agencies in their enforcement.

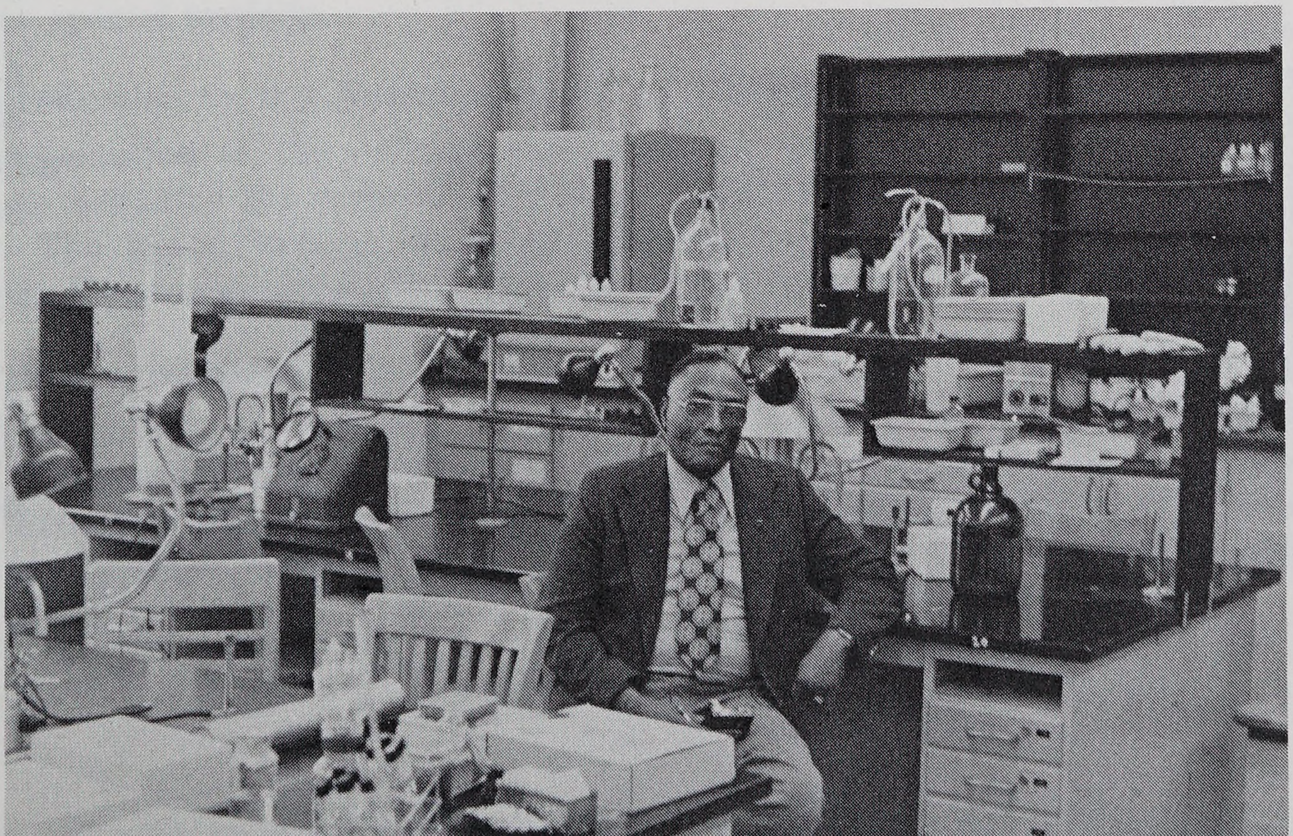
VETERAN'S CLUB

Nash Technical Institute has organized a Veteran's Club, in affiliation with the International Veteran's Club. All students who are U. S. service veterans are members. The Club meetings are on a "called" basis and are normally held when group opinion or action is needed regarding information from the Veteran's Administration.



General Education

Associate in Arts Degree



GENERAL EDUCATION

The general education program is a two-year liberal arts program requiring 64 semester hours for qualifying for the Associate in Arts Degree. Through a contractual affiliation with North Carolina Wesleyan College, the student enrolled in this program can be assured of transferring approximately one-half (60 semester hours) of the hours required for the Bachelor's Degree.

Degree Requirements

The student should enroll in courses that fulfill graduation requirements. This will allow the student to enroll at North Carolina Wesleyan College at the conclusion of the two-year program with full junior standing. Each student should enroll in English II, Religion I, and one other course in religion or philosophy. In addition to the above, a student should enroll in two courses from each of the three divisions listed below:

Humanities Division	**Semester Cr. Hrs.**
Art 1,2	3-3
English Literature (GS)	3
American Literature (GS)	3
Humanities 1,2	3-3
World Literature 21,22	3-3
Philosophy 21,23	3-3
Religion 12	3
Music 3	3
French Literature (GS)	3
German Literature (GS)	3
Spanish Literature (GS)	3
Social Science Division	
Economics 11, 12	3-3
Accounting 33,34	3-3
Business 11	3
Western Civilization 1,2	3-3
History 41,42	3-3
Political Science 11,12,31	3-3-3
Sociology 27,30	3-3
Science Division	
Biology 10,14	4-3
Chemistry 11,12	4-4
Math 9,13	3-3
Physical Science 1,2	3-3
Psychology 12	4

Courses offered as free electives are:

Education 1	4
Education 3	4
Computer Programming (GS)	4
Psychology 11	3
Special Education 31	3
Group studies in various areas of study	
Physical Education 41	3
Physical Education 46	3
Total Semester Hours Required	60

COURSE DESCRIPTIONS

1 Art Appreciation **3 Semester Hours**

An introduction to the understanding and appreciation of the fine arts through a broad survey of fundamental artistic techniques and art history.

2 Art Education **3 Semester Hours**

An introduction to various philosophies of art education; practice in various media and techniques leading to the development of an art curriculum in the elementary school.

1,2 Introduction to the Humanities **3,3 Semester Hours**

An introduction to the nature of the fine arts examining their basic similarities, Purposes, and techniques.

21, 22 World Literature **3,3 Semester Hours**

Prerequisite: English 11.
Analytical study of selected works of literature in translation.

21 Introduction to Philosophy **3 Semester Hours**

Introduction to the study of philosophy. Includes discussion of problems in metaphysics, ethics, philosophy and religion and political philosophy.

23 Philosophical Procedures **3 Semester Hours**

Gateway to philosophical studies for those interested in majoring in philosophy. Explores historical figures and movements, philosophical problems and possibilities for special projects.

12 Introduction to the Academic Study of Religion **3 Semester Hours**

An introduction to the concepts and methods used in the study of religion in order to acquaint the student with the possibilities and procedures for intensive study. The broad variety of man's religious beliefs and practices will be considered. A gateway course primarily for those interested in majoring in religion.

3 Music Appreciation **3 Semester Hours**

An introduction to musical understanding, designed for students who have had little contact with the art. The elements of music, its styles and forms, as seen through a chronological study of the major monuments of music literature. Not open to music majors.

11, 12 Principles of Economics **3,3 Semester Hours**

An introduction to principles of economics, including the theory of prices, the allocation of resources, the distribution of income, business and labor organizations, monetary and banking system, income determination, public finance, international trade, economic development, and economic goals.

33,34 Basic Accounting Principles **3,3 Semester Hours**

A study of the role of accounting; basic concepts and methodology; mass data processing; valuation and income determination principles; management and internal control problems of basic financial statement components; elements of management accounting, analysis, reporting control as applied to proprietorships, partnerships, corporations, and other institutions.

11 Introduction to Business Studies **3 Semester Hours**

An introduction to business studies, including the background and scope of American Business, its planning and development, topics in marketing and management, information and communications systems, and the social environment of business today.

1,2 Western Civilization **3,3 Semester Hours**

An introduction to historical methods and study. Concentration will be on the great ideas, men, and events which have shaped the Western world. The first term will deal with the period up to the mid-Seventeenth Century, and the second term, the period since that time.

41,42 History **3,3 Semester Hours**

The first term will be a chronological examination of the growth and development of American civilization from the first settlements to the present. The second term will concentrate on selected interpretive themes in American history. History 41 is prerequisite to 42.

11 Introduction to Political Science **3 Semester Hours**

A survey of the major areas of political science to include the major political institutions of any polity; an introduction to political theory and the "isms" of modern politics; and an introduction to political behavior and values.

12 The American Political System **3 Semester Hours**

An introduction to the theory and practice of American national government and politics.

31 American State and Local Government **3 Semester Hours**

Prerequisite: Political Science 12.

Problems in state, county, and city government, including the administration of public services such as education, public welfare, and law enforcement; consideration of intergovernmental relationships.

27 Introduction to Sociology **3 Semester Hours**

An introduction to the systematic study of the social sources and social consequences of human behavior through a survey of the fundamental concepts, theories, and procedures of sociology.

30 Cultural Anthropology 3 Semester Hours

A study of the origin and development of man's cultures with special emphasis on preliterate societies, prehistoric and contemporary; the impact of advanced societies; and the future of man in anthropological perspective.

10 Principles of Biology 3 Semester Hours

Prerequisite to all other courses in biology.

The major unifying principles of biology, including ecology, evolution, heredity, development, cellular structure, and functions. (Must be accompanied by Biology 10L).

14 Human Biology 4 Semester Hours

A course designed to extend and refine appreciation for man as a biological species. Study will include the historical beginning of mankind. Through investigation of the uniqueness of man's structural, physiological, and behavioral characteristics, the student will be able to develop a better understanding of man's place in nature.

11-12 General Chemistry 4-4 Semester Hours

This course makes maximum use of modern teaching methods without sacrifice of traditional topics and has proven to be of value to non-science majors, while essential to science majors.

The first term of laboratory work emphasizes correct techniques and precision in handling of solids, gas, liquids, and solutions enabling the student to employ basic gravimetric and volumetric analysis procedures. The second semester contains a representative selection of ions for qualitative analysis. Techniques included are use of the pH meter and basic spectrophotometry.

9 Introduction to Modern Mathematics 3 Semester Hours

Survey of selected topics in mathematics including a brief introduction to logic, applications of set theory, the structure of the real number system, and basic concepts of algebra and geometry.

13 College Algebra and Trigonometry 3 Semester Hours

Prerequisite: Proven proficiency.

A one-term course combining advanced topics in algebra and the principles and functions of plane trigonometry. Open to students with sufficient high school mathematics as determined by the Department of Mathematics.

1,2 Physical Science 3-3 Semester Hours

A comprehensive introductory program designed to give non-majors and general education students the basic understanding of the political sciences and their relationship to the earth sciences. A lab program is provided for the elucidation of techniques and uses of experimental data.

11,12 General Psychology 3-4 Semester Hours

prerequisite for all other psychology courses.

A survey of the general field of psychology with emphasis upon the methods and results of scientific investigation. The first term includes maturation, individual differences, measurement, emotion, personality, behavioral disorder, and social processes. The first term cannot be used to satisfy Science Division requirements. The second term includes experimental method, physiological bases of behavior, motivation, sensory and perceptual processes, and learning and thinking.

1 Education — Introduction to Education **4 Semester Hours**

The philosophical, psychological and historical background in American education. This course is prerequisite to all other education courses for those who plan to teach at the elementary-intermediate level or at the secondary level. A minimum of thirty hours of observation in a local school is required.

3 Teaching in Early Childhood **4 Semester Hours**

An introduction to the teaching profession for the student interested in educational study of the historical, philosophical, and psychological aspects; the nature of teaching, organization, and administration; and the examination of the learning process at it relates to young children. Thirty hours of classroom observation will be required.

31 Introduction to Exceptional Children **3 Semester Hours**

Exceptional children and their problems, including the intellectual deviant, visually handicapped, deaf and hard of hearing, children with speech problems, physically handicapped, and emotionally disturbed.

41 Principles of Health and Physical Education **3 Semester Hours**

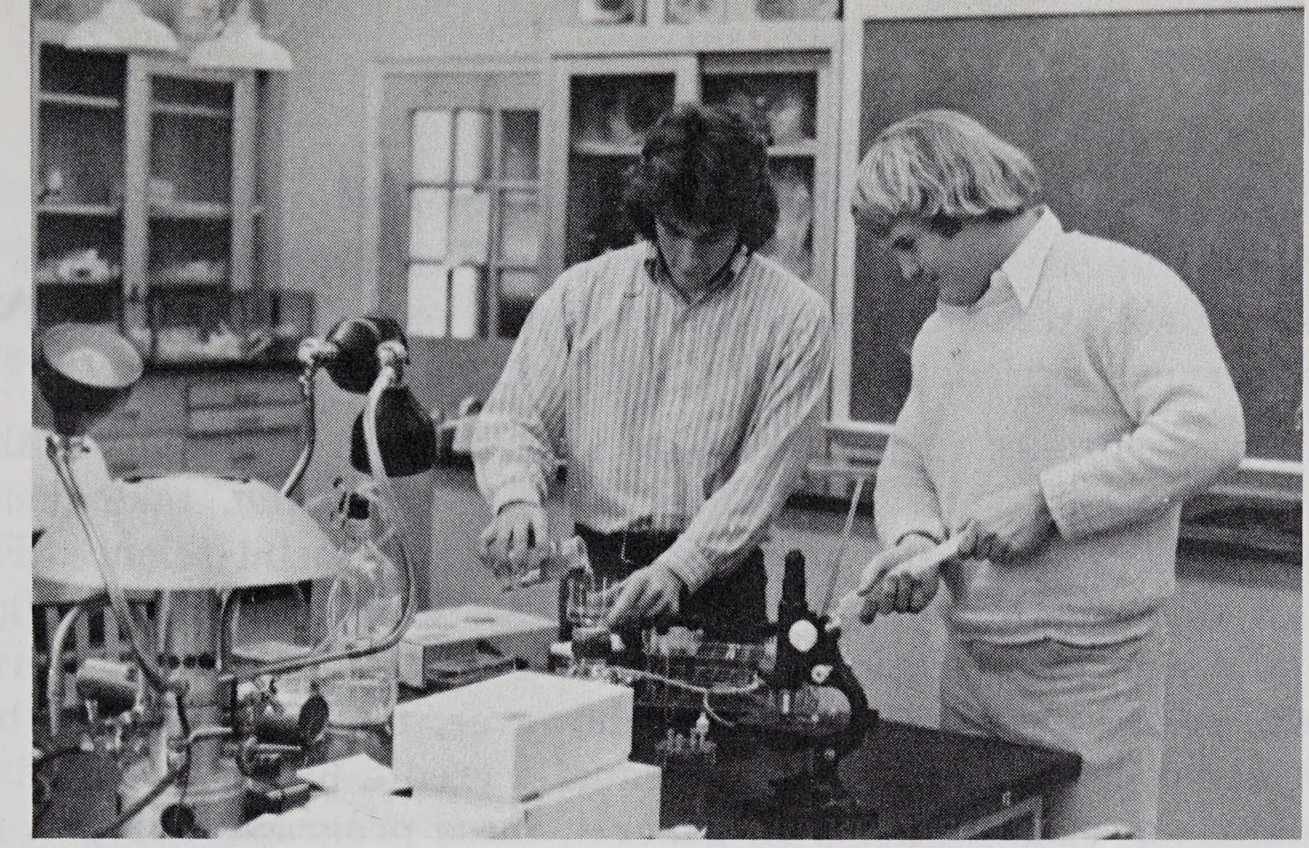
An introduction to the field of health and physical education including its historical and sociological foundations.

46 Human Anatomy and Physiology **3 Semester Hours**

A lecture course to study the structure and functions of the human body and its systems in relation to health and physical education.

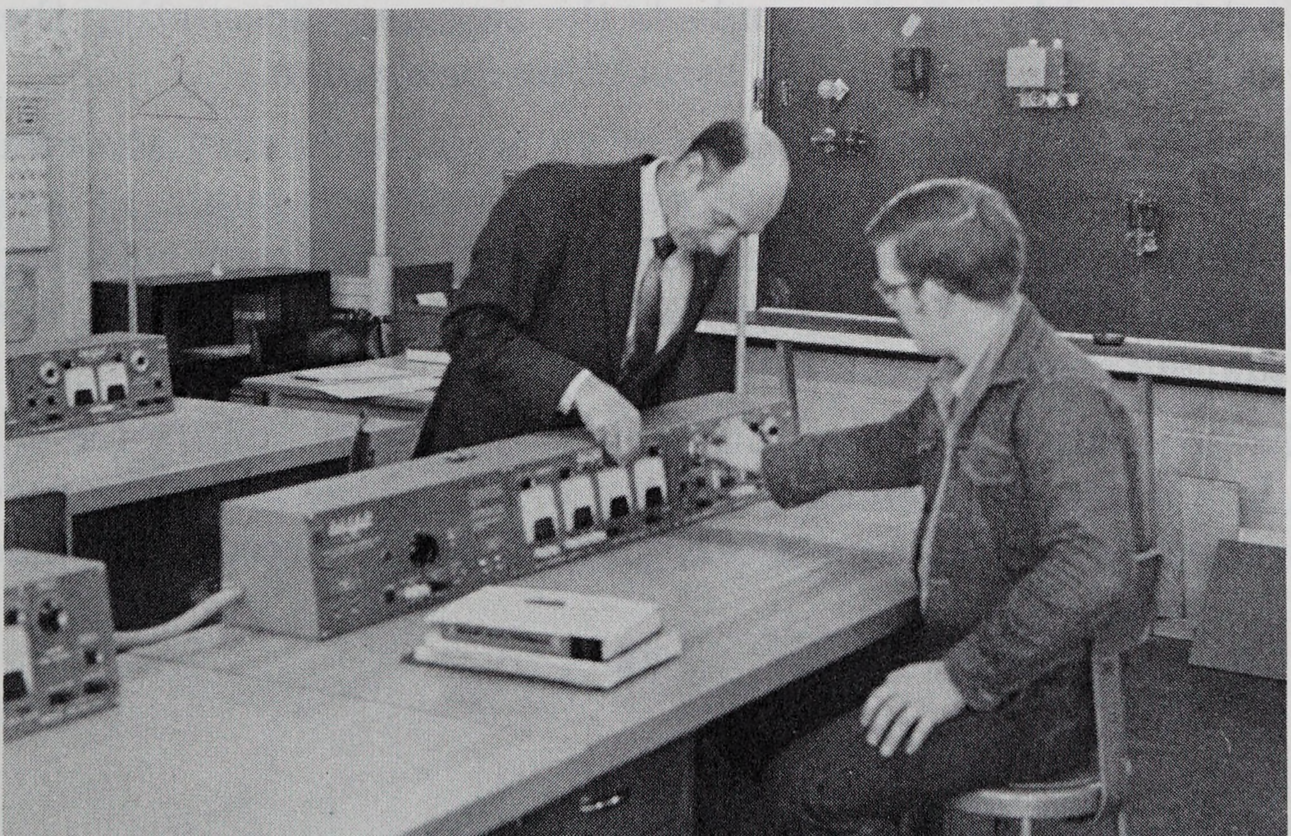
(GS) Group Study

Courses listed with notation (GS) signifies a Group Studies. The course content in Group Studies is not constant and will change from term to term depending on the instructor. Therefore, there is no stated course description.



Technical Programs

Associate in Applied Science Degree



THE TECHNICAL DIVISION

The Technical Division offers programs to prepare students for work in such areas as: semi-professional, managerial, clerical and sales, service, agricultural and skilled occupations.

Students enrolled in the technical programs, in addition to taking courses that directly related to a specific occupation, take general education courses in the areas of English and social science. Even though the technical programs are college level, they are designed for entrance into employment, not for college transfer. Certain courses in the technical programs, however, may be accepted by a four-year college or university as transfer credit, usually on the basis of qualifying examinations. In general, these programs are two academic years in length and lead to the awarding of an Associate in Applied Science Degree.

All Technologies require 96 quarter hours plus individual departmental requirements.

The graduate of the technical program will find his specialized skill increasingly more valuable as our industrial society becomes more complex.

Optional courses have been made available for students wishing more indepth study in some of the Technologies. These courses will usually be taught during the summer quarter.

ACCOUNTING TECHNOLOGY

Accounting is one of the fastest growing employment fields in America today, and the job outlook for good accountants seems bright for many years to come. These opportunities result from the tremendous business and industrial expansion in all parts of the country. Because of this emphasis, there is a growing need for trained people in the area of accounting. The Accounting curriculum is designed to fill this need by offering students the necessary accounting theories and skills for entry into the accounting profession.

The duties and responsibilities of an accountant vary somewhat in different firms. Some of the things an accountant might do are: record transactions, render periodic reports, maintain cost records, make special reports, complete tax returns, audit the books, and advise management in areas of financial affairs.

The graduate of the Accounting curriculum may qualify for various jobs in business and industry leading to any of the following accounting positions: accounting clerk, payroll clerk, accounting machine operator, auditor, and cost accountant. This training plus further experience should prepare graduates to become office managers, accounting supervisors, and to fill other responsible positions in a business firm.

ACCOUNTING

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours
			Class	Lab	Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-BUS	101	Introduction to Business	5	0	5
T-BUS	102	Typewriting or elective	2	3	3
T-MAT	110	Business Math	5	0	5
		Elective	3	0	3
			18	3	19
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-BUS	120	Accounting I	3	2	4
T-BUS	110	Office Machines	2	2	3
T-BUS	115	Business Law	3	0	3
T-ECO	102	Economics	3	0	3
			14	4	16
THIRD QUARTER					
T-ENG	206	Business Communication	3	0	3
T-BUS	121	Accounting II	3	2	4
T-BUS	116	Business Law	3	0	3
T-ECO	104	Economics	3	0	3
T-BUS	112	Filing or elective	3	0	3
			15	2	16
FOURTH QUARTER					
T-ENG	204	Oral Communication	3	0	3
T-BUS	225	Cost Accounting I	3	2	4
T-BUS	122	Accounting III	3	2	4
T-EDP	104	Introduction to Data Processing	5	0	5
T-BUS	219	Credit Procedures or elective	3	0	3
			17	4	19

FIFTH QUARTER

T-BUS	103	Report Writing	3	0	3
T-BUS	123	Business Finance or Elective	3	0	3
T-BUS	222	Intermediate Accounting I	3	2	4
T-BUS	226	Cost Accounting II	3	2	4
T-PSY	235	Business Management	3	0	3
			—	—	—
			15	4	17

SIXTH QUARTER

T-BUS	229	Taxes	3	2	4
T-BUS	269	Auditing	3	2	4
T-BUS	223	Intermediate Accounting II	3	2	4
T-ENG	206	Applied Psychology	3	0	3
		Elective	3	0	3
			—	—	—
			15	6	18

Required course hours	87
Elective hours required	18
	——
Total	105

Note: The student may lighten his course load by attending an optional summer session during which a selection of electives will be offered.

AGRICULTURAL BUSINESS TECHNOLOGY

Rapid technological changes in farming and related agricultural businesses have given rise to the need for more technically educated people. A variety of agricultural businesses and industries employ persons to assist in marketing, processing, and distributing farm products and providing services to the farmer. Many responsible positions in agricultural businesses and industries require technical education not available in high schools or in four-year colleges.

Agricultural production is undergoing tremendous changes. The trends are to larger, highly mechanized and specialized farms with huge capital investments. This means that there will be an increasing demand for capable farm managers to coordinate the purchasing, production, and marketing of these larger agricultural production operations.

Farm managers of the future must possess greater technical competence to remain in the highly competitive production phase of agriculture. They must be able to cope with present production problems and adapt to rapid technological changes.

The Agricultural Business Technology curriculum is designed to help students acquire knowledge, understandings, and abilities in the broad field of agricultural business—including agricultural production. It combines knowledge of agriculture with business education to prepare the graduate for many of the varied employment opportunities in agribusiness. The specific objectives of this curriculum are to develop student competencies in understanding the principles of organization and management in agricultural businesses and industries; understanding the application of the principles of business management to agricultural production, and the abilities essential to the management of an efficient well-organized farming operation; understanding of the basic principles of our economic system, marketing, credit, price concepts, and governmental policies and programs relating to agriculture; and understanding the agricultural sciences most essential to the production and marketing of agricultural products—including knowledge of the animal, plant, and soil sciences and their relationships with ability to apply these educational experiences to practical problems of agricultural business and industry.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Hours Per Week Lab	Quarter Hours Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-BUS	110	Business Mathematics	5	0	5
T-AGR	102	Typewriting	2	3	3
T-AGR	125	Animal Science	3	4	5
			13	7	16
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-CHM	101	Chemistry	4	2	5
T-BUS	101	Introduction to Business	5	0	5
T-AGR	185	Soil Science and Fertilizer	3	4	5
			15	6	18
THIRD QUARTER					
T-ENG	206	Business Communication	3	0	3
T-BUS	120	Accounting	5	2	6
T-MAT	104	Introduction to Agricultural Economics	3	2	4
T-AGR	170	Plant Science	3	4	5
			14	8	18

FOURTH QUARTER

				T-AGR	
	199	Cooperative Work Experience	0	40	4

FIFTH QUARTER

T-ENG	204	Oral Communication	3	0	3
T-BUS	110	Office Machines	2	2	3
T-BUS	121	Accounting	5	2	6
T-BUS	123	Business Finance	3	0	3
T-AGR	204	Farm Business Management	3	4	5
			16	8	20

SIXTH QUARTER

T-ENG	103	Report Writing	3	0	3
T-BUS	232	Sales Development	3	0	3
T-AGR	201	Agricultural Chemicals	3	4	5
T-AGR	205	Agricultural Marketing	3	4	5
		Elective	–	–	2
					18

SEVENTH QUARTER

T-AGR		Social Science Elective	–	–	3
T-AGR	218	Agricultural Mechanization	3	4	5
T-AGR	228	Livestock Diseases and Parasites	3	4	5
		Agricultural Elective	–	–	5
			–	–	18
		Total Quarter Hrs. in Course			101
		Electives			7
		Total			108
		Work Experience			4
					112

Pending approval of N. C. State Board of Education

AGRICULTURE SCIENCE AND MECHANIZATION

(With Technical Specialty Opinion)

VETERANS COOPERATIVE FARM PROGRAM

This curriculum provides a training program for developing the basic knowledge and skills needed for the successful operation and management of a general farming program involving crops and livestock. There is a growing scarcity of young men trained in basic agricultural science and mechanization. Larger farming operations require more mechanization and tremendous outlays of capital; thus, the need for trained farmers becomes increasingly critical. The objective of this curriculum is to provide the managerial and operative training needed for successful farm operation.

Special benefits are provided for veterans who are engaged in full-time farming and who otherwise qualify. Additional information is available upon request.

For those who desire the Associate of Applied Science Degree, nine hours in English and six hours in the social sciences are required in addition to the 104 hours of agricultural science and mechanization.

To be eligible for this program a Veteran must: (1) Be engaged in farming to the extent that his farming operation and educational program will require his full-time; (2) Attend the organized classes conducted for the course on the basis of 12 clock hours per week.

CALENDAR

VETERAN FARM COOPERATIVE PROGRAM

NASH TECHNICAL INSTITUTE

SPRING QUARTER 1973-1974

March 11	Registration and classes begin
April 15	Easter Holiday
May 24	End of Spring Quarter

SUMMER QUARTER 1973-1974

May 27	Registration & classes begin
July 8	Begin eight week summer break
September 4	End of 8 week break and summer quarter resumes
October 4	End of Summer Quarter

FALL QUARTER 1974-1975

October 7	Registration and begin classes
December 20	End of Fall Quarter

WINTER QUARTER 1974-1975

December 23	Registration and classes begin
December 25-30 and January 1	Christmas and New Year Holidays
March 7	End of Winter Quarter

SPRING QUARTER 1974-1975

March 10	Registration and classes begin
March 31	Easter Holiday
May 23	End of Spring Quarter

SUMMER QUARTER 1974-1975

May 26	Registration and classes begin
July 7	Begin 8 week Summer break
September 3	End of 8 week Summer break and Summer Quarter resumes
October 3	End of Summer Quarter

FALL QUARTER 1975-1976

October 6	Registration and classes begin
December 19	End of Fall Quarter

WINTER QUARTER 1975-1976

December 22	Begin Winter Quarter
December 22, 24	Christmas Holidays
December 29	Registration and classes begin
March 5	End of Winter Quarter

SPRING QUARTER 1975-1976

March 8	Registration and classes begin
April 19	Easter Holidays
May 21	End of Spring Quarter

SUMMER QUARTER 1975-1976

May 24	Registration and classes begin
July 5	Begin 8 week Summer break
August 30	End of 8 week break and Summer Quarter resumes
September 6	Labor Day Holiday
October 1	End of Summer Quarter

FALL QUARTER 1976-1977

October 4	Registration and classes begin
December 17	End of Fall Quarter

WINTER QUARTER 1976-1977

December 20	Registration and classes begin
December 27, 29	Christmas Holidays
March 4	End of Winter Quarter

AGRICULTURE SCIENCE AND MECHANIZATION
(With Technical Specialty Option)

VETERANS COOPERATIVE FARM PROGRAM

SUGGESTED CURRICULUM

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
AGR	185	Soil Science and Fertilizers	2	2	3
AGR	207	Farm Records and Taxes	2	2	3
AGR	126	Farm Forest Management	2	0	2
			6	4	8
SECOND QUARTER					
AGR	187	Fertilizers and Lime	2	2	3
AGR	271	Field Crops	2	0	2
AGR	278	Weed Identification and Control	2	2	3
			6	4	8
THIRD QUARTER					
AGR	272	Tobacco Production	2	2	3
AGR	275	Tobacco Production Workshop	0	6	2
			2	8	5
FOURTH QUARTER					
AGR	204	Farm Business Management	3	3	4
AGR	226	Swine Production	2	0	3
AGR	103	Feeding and Management	2	0	2
			7	3	9
FIFTH QUARTER					
AGR	215	Farm Machinery, Repair, and Maintenance	2	4	4
AGR	119	Techniques of Welding	1	3	2
			3	7	6
SIXTH QUARTER					
AGR	201	Agricultural Chemicals: Pesticides	2	2	3
AGR	245	Crop Insects	2	2	3
AGR	136	Agricultural Mathematics	2	0	2
			6	4	8

SEVENTH QUARTER

AGR	222	Farm Electrification	2	2	3
AGR	220	Farm Electrification Workshop	0	6	2
			2	8	5

EIGHTH QUARTER

AGR	128	Farm and Home Construction	2	4	4
AGR	205	Agricultural Marketing	2	2	3
			4	6	7

NINTH QUARTER

AGR	290	Soil and Water Conservation	2	4	4
AGR	228	Animal Diseases and Parasites	2	2	3
			4	6	7

TENTH QUARTER

AGR	127	Animal Nutrition	2	2	3
AGR	296	Agricultural Programs and Agencies	2	2	3
AGR	295	Agricultural Law	2	0	2
			6	4	8

ELEVENTH QUARTER

AGR	105	Pastures and Forage Crops	2	0	2
AGR	106	Pastures and Forage Crops Workshop	0	6	2
AGR	206	Agricultural Finance	2	0	2
			4	6	6

TWELFTH QUARTER

AGR	218	Agricultural Mechanization	2	2	3
AGR	155	Plant Pathology	2	2	3
AGR	227	Beef Production	2	0	2
			6	4	8

Additional Courses Required For the Associate of Applied Science Degree

ENG	101	Communications Skills I	3	0	3
ENG	102	Communications Skills II	3	0	3
ENG	103	Communications Skills III	3	0	3
ENG	204	Oral Communications	3	0	3
		Social Science Elective	3	0	3
			15	0	15
		Total Quarter Hours Required			110

ARCHITECTURAL DRAFTING TECHNOLOGY

This program is designed to provide the individual with knowledge and skills that will lead to employment in the field of architectural drafting and related areas in the construction industry and afford opportunity for rapid advancement in technical knowledge and proficiency. Technical courses are included which will enable the graduate to advance into related areas of work as job experience is obtained. This program represents the education requirements as established by the Architectural Drafting Advisory Committee, which is a panel formed by members of the AIA, consultants, and curriculum lab specialists. The statement of goals and expectations of this committee are as follows:

Goal: To conduct a training course which would prepare a person with a high school background to develop, by further study and experience, the ability necessary to communicate the architect's designs to the builder.

We anticipate that graduates of the proposed curriculum would be prepared to enter an architect's office as "technicians" with the ability to turn the architect's designs into working drawings for the building industry. Graduates should be competent draftsmen well informed on the building industry in general and the operation of architects' offices, and should have a knowledge of materials and techniques of construction. Their training should include an appreciation of the mechanical, electrical, and structural aspects of buildings. Basic training in oral and written communication will give graduates a background for developing their potential in broader aspects of architectural practice, such as specification writing, supervision of construction and specification writing.

We do not expect that graduates be designers or artists, but competent "technicians" filling an important position in the field of architectural practice. We recognize that all graduates will not work for architects. The curriculum is broad enough to enable graduates to work in related fields of construction. Their advancement to positions of responsibility would be dependent only on their own aspirations and willingness to study and work. Their education would just begin with this curriculum.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-MAT	101	Technical Mathematics	5	0	5
T-PHY	101	Physics: Properties of Matter	3	2	4
T-DFT	106	Architectural Drafting	2	6	4
T-CIV	105	Architectural Materials & Methods	3	3	4
			16	11	20
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-MAT	102	Technical Mathematics	5	0	5
T-PHY	102	Physics: Work, Energy, Power	3	2	4
T-DFT	107	Architectural Drafting	2	6	4
T-AHR	106	Architectural Mechanical Equipment	3	3	4
			16	11	20
THIRD QUARTER					
T-ENG		Elective	3	0	3
T-MAT	103	Technical Mathematics	5	0	5
T-PHY	103	Physics: Electricity	3	2	4
T-DFT	108	Architectural Drafting	0	9	3
T-CIV	114	Statics	5	0	5
			16	11	20
FOURTH QUARTER					
T-ENG	204	Oral Communication	3	0	3
T-CIV	216	Strength of Materials	3	2	4
T-DFT	220	Architectural Drafting	2	9	5
T-CIV	101	Surveying	2	6	4
			10	17	16
FIFTH QUARTER					
T-ENG	103	Report Writing	3	0	3
T-DFT	221	Architectural Drafting	2	9	5
T-DFT	233	Office Practice Seminar	2	0	2
T-DFT	235	Codes, Specifications, and Contract Documents	3	3	4
		Elective (Min.)			3
			10	12	17

SIXTH QUARTER

		Social Science Electives	3	0	3
T-DFT	222	Architectural Drafting	2	9	5
T-DFT	236	Construction Estimating and Field Inspecting	3	3	4
		Elective (Min.)			3
			—	—	—
			8	12	15
		Total Quarter Hours in Courses			102
		Electives (Min.)			6
					—
		Total			108

SEVENTH QUARTER OPTION

T-DFT	237	Architectural Perspectives	2	4	4
T-DFT	238	Architectural Rendering	2	4	4
T-DFT	240	Model Building	2	6	4
			—	—	—
			6	14	12

Pending approval of N. C. State Board of Education

ASSOCIATE DEGREE NURSING
(With Licensed Practical Nurse Option)

The Associate Degree Nursing Curriculum is designed to prepare students to function in the technical aspects of nursing. The student learns to perform those duties usually ascribed to the beginning registered nurse, giving patient-centered bedside nursing. Related courses provide the student with basic scientific knowledge and with understanding of human relations necessary for effective bedside nursing.

The registered nurse graduate of an Associate Degree program performs those nursing procedures related to direct patient care, including procedures related to hygienic needs of patients, treatments and medications, diagnosis, prevention of illness, and rehabilitation.

LPN Option

A student in the Associate Degree Nursing Curriculum may exit from the program at the completion of the first four quarters and, upon passing the N. C. State Board Licensing examination, be qualified as a Licensed Practical Nurse.

ASSOCIATE DEGREE NURSING

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours
			Class	Lab	Credit
FIRST QUARTER					
Nursing	101	Fundamentals of Nursing I	6	6	8
Psychology	101	General Psychology	3	0	3
English	101	Composition	5	0	5
Biology	121 122A	Human Physiology and Anatomy	3	3	5
			17	9	21
SECOND QUARTER					
Nursing	102	Fundamentals of Nursing II	4	9	7
Biology	122B 123	Human Physiology and Anatomy	3	3	5
English	102	Composition II	5	0	5
Psychology	201	Psychology of Childhood	3	0	3
			15	12	20
THIRD QUARTER					
Nursing	103	Maternal and Child Care	4	12	8
Sociology	110	Introduction to Sociology	5	0	5
Biology	110	Fundamentals of Microbiology	2	4	4
			11	16	17
FOURTH QUARTER					
				Nursing	
	104	Nursing Care in Physical and Mental Illness I	8	18	14
FIFTH QUARTER					
Nursing	201	Nursing Care in Physical and Mental Illness II	5	15	5
Nursing	202	Psychiatric Nursing	8	15	6
Nursing	203	Nursing Trends	3	0	3
			16	30	14
SIXTH QUARTER					
Nursing	204	Nursing Care in Physical and Mental Illness III	5	15	10
		Elective	5	0	5
			10	15	15

SEVENTH QUARTER

Nursing	205	Nursing Care in Physical and Mental Illness IV	5	15	10
		Elective	5	0	5
			—	—	—
			10	15	15
		Total Hours of Required Courses			107
		Required Electives			10
					—
		Total			117

AREA L NURSING PROGRAM CONSORTIUM COURSE OVERVIEWS

1st QUARTER

Nursing 101—Fundamentals of Nursing I (6-6) Quarter Hours Credit—8

Fundamentals of Nursing I is an introductory course which provides the opportunity for students to explore basic facts, principles, and concepts related to nursing roles and functions, patient needs, nursing problems, the problem-solving process, and the nurse-patient relationship. The nurse's role in assessing and meeting patient's needs for comfort, cleanliness, rest, activity, exercise and elimination is explored. Nutrition and safety are included. Basic skills will be developed through planned clinical experience in community health facilities under the supervision of the nursing faculty.

Psychology 101—General Psychology (3-0) Quarter Hour Credit—3

This course is intended to provide the student with understanding and information about the basic principles of human behavior. Principles relating to learning, motivation, perception, emotion and conflicts are presented. It is anticipated that introductory information relative to tests and measurements will be presented.

English 101—Composition (5-0) Quarter Hours Credit—5

This is a five-quarter hour course designed to introduce the student to the essential characteristics of the essay and poetry as types of literature. Emphasis is also placed on eliminating gross errors from written composition and the principles of clear expository writing. Prerequisite to English 102.

Biology 121 and 122A—Human Physiology and Anatomy (3-3) Quarter Hour Credit—5

Biology 121 and 122A are concerned with introductory principles of human anatomy and physiology including structures and functions of cells, tissues, and the integumentary stystem. Also presented is basic information relating to structure and function of the skeletal, muscular and respiratory systems. This course is prerequisite to Biology 122B and 123.

2nd QUARTER

Nursing 102—Fundamentals of Nursing II (4-9) Quarter Hour Credit—7

Fundamentals of Nursing II focuses upon facts, principles, concepts, and skills required to meet the remaining basic physiological needs: Maintaining and supporting oxygen needs and maintaining fluid and eletrolyte balance. Units of study also include introduction to pathophysiological concepts, the nurse's role in administering therapeutic agents, meeting special needs of the surgical patient, and meeting needs of the critically or terminally ill patient. Through supervised laboratory experience, the student will be provided increased opportunities to develop skills of assessing needs—planning and implementing care to meet the individual needs of patients.

Biology 122B and 123—Human Physiology and Anatomy (3-3) Quarter Hour Credit—5

Class material and laboratory experiences presented in this course consist of structures and functions supporting sensory-response phenomena, circulation, digestion, excretion and reproduction. The endocrine system, human embryology and elementary human genetics are also discussed.

English 102—Composition II (5-0) Quarter Hour Credit—5

This course is designed to teach the student to write a critical essay and to teach the scientific method of research as applied to the writing of a library paper. The student will also study the novel, the short story and the drama as types of literature and as bases for critique and reviews. This is a five quarter-hour course.

Psychology 201—Psychology of Childhood (3-0) Quarter Hour Credit—3

Psychology of childhood is a three quarter-hour course which deals with the major theories in child psychology and relates child psychology to other child development fields. The pre-natal factors as related to behavioral development and the behavioral growth of childhood are also covered in detail.

3rd QUARTER

Nursing 103—Maternal and Child Care (4-12) Quarter Hour Credit—8

The course in Maternal and Child Care is family centered, beginning with the maternity cycle and continuing with child care from birth through adolescence. Major emphasis is upon normal aspects of the maternity cycle, infancy, and childhood; however, complications and deviations from normal are considered. Diseases unique to childhood are included. Related nutrition and pharmacology are taught concurrently. Clinical experience is provided in affiliating hospitals, health departments, kindergartens, and/or licensed day care centers.

Sociology 110—Introduction to Sociology (5-0) Quarter Hour Credit—5

The thesis of this course is that human behavior manifests itself through social interaction. This may be accomplished by two people, a small group or a society. The aim of instruction will be to acquaint the students with methods of analyzing social interaction. In striving for this goal emphasis will be placed on sociological concepts, but only to the extent of building a workable vocabulary to understand how social scientists have developed theories as well as practical application of sociology.

Students will be encouraged to understand social behavior by using the knowledge acquired in the course to analyze day to day personal and social occurances.

Biology 110—Fundamentals of Microbiology (2-4) Quarter Hour Credit—4

Fundamentals of Microbiology is a general study of micro-organisms and their importance to man, with special emphasis on their fundamental life processes; and including a brief introduction to epidemiology and immunology. This is a four credit hour course.

4th QUARTER

Nursing 104—Nursing Care in Physical and Mental Illness I (8-18) Quarter Hour Credit—14

Nursing Care in Physical and Mental Illness is a course which introduces the common medical-surgical entities, their causes, and medical and/or surgical therapies. Adjunct drug and diet therapy are incorporated in the discussion of each disease process. Clinical laboratory experiences are selected and guided so that students have the opportunity to begin problem-solving techniques and implement nursing care plans. The material included in the course is intended to supplement courses taught during the 1st year to prepare the students to take the Licensed Practical Nurse State Board Examination.

5th QUARTER

Nursing 201—Nursing Care in Physical and Mental Illness II (5-15) 5½ Weeks. Quarter Hour Credit—5

Nursing Care in Physical and Mental Illness II builds upon the concepts and principles of Nursing 101 and 102 and upon portions of the content of Nursing 104. Health problems associated with reproduction, genitourinary functions, digestion and absorption are presented. Nursing goals and medical management, including drug and diet therapy are integrated with each disease entity. Student laboratory experiences are selected with emphasis on identifying, planning, implementing and evaluating patient care of a fairly complex nature.

Nursing 202—Psychiatric Nursing (8-15) 5½ weeks. Quarter Hour Credit—6

Psychiatric Nursing is a course in the care of patients with acute behavorial disorders. The etiology, treatment, and prevention of mental illness are included. Theory and clinical experiences in a psychiatric hospital and clinics are provided concurrently, enhancing the students' understanding of the needs and behavior of emotionally disturbed patients.

Nursing 203—Nursing Trends (3-0) Quarter Hour Credit—3

Nursing Trends is a course designed to assist the student nurse make the transition from the role of student to practitioner. An overview of career opportunities and the need for continuing education are included. The contributions made to the registered nurse practitioner by professional organizations and the need for awareness of current legislature are emphasized.

6th QUARTER

Nursing 204—Nursing Care in Physical and Mental Illness III—(5-15) Quarter Hour Credit—10

Nursing Care in Physical and Mental Illness III provides the student with opportunities to focus on the medical management and nursing goals and care of patients whose health problem imposes a limitation upon their ability to meet a basic need. The curriculum builds upon portions of the content of Nursing 104. Units I, II provides the student with information and experience in the care of patients with cardiopulmonary vascular aberrations occurring as a result of oxygen diminution. Unit III presents an overview of Orthopedic, Neuromuscular, Central Nervous System, Endocrine and Perceptive Disorders which interfere with patient's rest and activity. Clinical laboratory experiences are planned to provide the student with opportunities to administer comprehensive care to patients with illnesses or diseases that share commonalities in pathophysiology and similar elements in nursing requirements.

Elective (3 or 5-0) Quarter Hour Credit—3 or 5

7th QUARTER

Nursing 205—Nursing Care in Physical and Mental Illness IV (5-15) Quarter Hour Credit—10

Nursing Care in Physical and Mental Illness IV deals with the care of patients with complex problems requiring intensive or specialized care. Primary focus is given to nursing patients in complex or multi-problem situations. The curriculum content requires the synthesis of knowledge and skills previously acquired in Nursing 201 and 204 and expands the concepts previously learned. The course content and the clinical experiences are planned to assist the student to develop an understanding of the complex roles of the beginning practitioner. Unit I outlines the roles of the nurse in Emergency Room, in Disaster, in Intensive and Coronary Care Units, and in the care of the comatose patient and/or the patient in shock. Unit II affords the student further opportunity to contemplate the management of nursing care. Considerations in planning the assignment of patient care, the role of the nurse leader, communications, and evaluation of nursing care are outlined to stimulate the student to think critically, to make appropriate judgments in solving nursing problems, and to objectively evaluate personal actions.

Elective (3 or 5-0) Quarter Hour Credit 3 or 5

BUSINESS ADMINISTRATION

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.

TWO-YEAR DEGREE PROGRAM IN BUSINESS ADMINISTRATION CURRICULUM

SUGGESTED CURRICULUM IN QUARTERS

			Hours Per Week		Quarter Hours
Course Title			Class	Lab	Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-BUS	102	Typewriting or Elective	2	3	3
T-MAT	110	Business Math	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-BUS	219	Credit Procedure or elective	3	0	3
			18	3	19
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-BUS	120	Accounting	3	2	4
T-BUS	110	Office Machines	2	2	3
T-BUS	115	Business Law	3	0	3
T-ECO	102	Economics	3	0	3
			14	4	16
THIRD QUARTER					
T-ENG	206	Business Communications	3	0	3
T-BUS	121	Accounting	3	2	4
T-BUS	116	Business Law	3	0	3
T-ECO	104	Economics	3	0	3
T-BUS	112	Filing or Elective	3	0	3
			15	2	16
FOURTH QUARTER					
T-ENG	204	Oral Communications	3	0	3
T-BUS	232	Sales Development	3	0	3
T-EDP	104	Introduction to Data Processing	3	2	5
T-BUS	239	Marketing	5	0	5
T-BUS	219	Credit Procedures or elective	3	0	3
			17	2	19

FIFTH QUARTER

T-ENG	103	Report Writing	3	0	3
T-BUS	123	Business Finance	3	0	3
T-BUS	243	Advertising	3	2	4
T-BUS	235	Business Management	3	0	3
T-BUS	245	Retailing or (elective)	3	0	3
T-BUS	233	Personnel Management or (elective)	3	0	3
T-BUS	252	Real Estate Principles or (elective)	3	0	3
			21	2	22

SIXTH QUARTER (SPRING QUARTER)

T-BUS	124	Business Finance	3	0	3
T-BUS	229	Taxes	3	2	4
T-BUS	271	Office Management	3	0	3
T-BUS	272	Principles of Supervision	3	0	3
T-PSY	206	Applied Psychology	3	0	3
T-BUS	253	Investment or (elective)	3	0	3
			18	2	19

SEVENTH QUARTER (SUMMER QUARTER)

OPTIONAL

T-BUS	219	Credit Procedure	3	0	3
T-BUS	245	Retailing	3	0	3
T-BUS	233	Personnel Management	3	0	3
T-BUS	253	Investment	3	0	3
T-ECO	108	Consumer Economics	3	0	3
			15	0	15
		Required Credit Hours			87
		Electives Required			18
		Total Hours Required			105

DRAFTING & DESIGN—MECHANICAL

This curriculum guide was prepared for the purpose of outlining a training program for students of mechanical drafting and design technology. There are certain identifiable duties which are common to all technicians of this general classification and which comprise the basic areas of technical knowledge they need. This curriculum has been designed for training persons in the accepted performance of these basic duties that will be assigned, and to enable the individual student to become proficient in a short time after he becomes employed in the industry.

Courses in general education have been included to give a student the assurance and understanding that comes with education upon a broad base. The technician associates with many levels of thought and expression—administrative personnel, scientists, engineers, skilled workmen—and must be able to communicate effectively with all levels. Courses containing essential information from related subject areas, such as mathematics, physics, and mechanics have been included in order to provide the student a better academic base for his training. Emphasis is placed upon ability to think and plan, as well as on drafting procedures and techniques.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-MAT	101	Technical Mathematics	5	0	5
T-PHY	101	Physics: Properties of Matter	3	2	4
T-DFT	101	Technical Drafting	0	6*	2
T-MEC	101	Machine Processes	0	6*	2
			11	14	16
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-MAT	102	Technical Mathematics	5	0	5
T-PHY	102	Physics: Work, Energy, Power	3	2	4
T-DFT	102	Technical Drafting	0	6*	2
T-MEC	102	Machine Processes	0	6*	2
			11	14	16
THIRD QUARTER					
T-MAT	103	Technical Mathematics	5	0	5
T-PHY	103	Physics: Electricity	3	2	4
T-PHY	106	Applied Mechanics	5	0	5
T-DFT	103	Technical Drafting	0	6*	2
			13	8	16
FOURTH QUARTER					
T-ENG	204	Oral Communication	3	0	3
T-DFT	201	Technical Drafting	2	6*	4
T-DFT	204	Descriptive Geometry	2	4	4
T-MEC	205	Strength of Materials	3	2	4
T-MEC	210	Physical Metallurgy	3	3*	4
			13	15	19

FIFTH QUARTER

T-ENG	103	Report Writing	3	0	3
T-DFT	211	Mechanisms	3	2	4
T-DFT	205	Design Drafting I	2	6*	4
T-MEC	211	Physical Metallurgy	3	3*	4
		Elective			4
			11	11	19

SIXTH QUARTER

		Social Science Elective	3	0	3
T-DFT	206	Design Drafting II	2	6*	4
T-MEC	235	Hydraulics & Pneumatics	3	3*	4
		Elective			4
		Elective			4
			8	9	19
		Total quarter hours in courses			90
		Minimum Electives			10
		Total			100

GENERAL OFFICE TECHNOLOGY

More people are now employed in clerical occupations than in any other single job category. Automation and increased production will mean that these people will need more technical skills and a greater adaptability for diversified types of jobs.

The General Office Technology curriculum is designed to develop the necessary variety of skills for employment in the business world. Specialized training in skill areas is supplemented by related courses in English, mathematics, accounting, business law, and applied psychology.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-MAT	110	Business Mathematics	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-BUS	102	Typewriting	2	3*	3
			15	3	16

SECOND QUARTER

T-ENG	102	Composition	3	0	3
T-ECO	102	Economics (or elective)	3	0	3
T-BUS	103	Typewriting	2	3*	3
T-BUS	110	Office Machines	2	2	3
T-BUS	115	Business Law	3	0	3
T-BUS	120	Accounting	3	2	4
			16	7	19

THIRD QUARTER

T-ENG	206	Business Communication	3	0	3
T-BUS	104	Typewriting	2	3*	3
T-BUS	112	Filing	3	0	3
T-BUS	183	(E,M,L) Vocabulary & Terminology (elective)	(3)	(0)	(3)
T-BUS	199	Introduction to Transcription (elc)	(3)	(0)	(3)
			14	3	15

FOURTH QUARTER

T-ENG	204	Oral Communication	3	0	3
T-BUS	134	Personal Development (elective)	(3)	(0)	(3)
T-BUS	212	(E,M,L) Machine Transcription	3	2	4
T-BUS	212	Machine Transcription	3	2	4
T-BUS	258	Typewriting-Speed Building (elc)	(2)	(3)	(3)
			13	7	16

FIFTH QUARTER

T-ENG	103	Report Writing	3	0	3
T-BUS	205	Advanced Typewriting	2	3*	3
T-BUS	213	(E,M,L) Advanced Machine Transcription	3	2	4
T-BUS	214	Secretarial Procedures	3	2	4
T-BUS	233	Personnel Management (elective)	(3)	(0)	(3)
			14	7	17

SIXTH QUARTER

T-EDP	104	Introduction to Data Processing	5	0	5
T-BUS	215	Office Application	1	10	6
T-BUS	271	Office Management	3	0	3
T-PSY	206	Psychology-Social Science (elc)	(3)	(0)	(3)
			12	10	17

Required course hrs.	85
Elective hrs. required	11
Total	96

* Manipulative Laboratory
(elc) Elective

INSTRUMENTATION TECHNOLOGY

The Instrumentation Technology Curriculum is a program of study that provides the knowledge of measuring and controlling devices and the development of the technical skills involved in the application of instruments to control the operations and processes in modern industries. The instrumentation technician is a key person in manufacturing firms and is responsible for supporting production. He must deal with process variables such as temperature, pressure, flow, level, humidity, density, viscosity, etc. to maintain good product quality. When system downtime occurs because of breakdown, he must be capable of repairing individual instruments and of restoring the system to production. His knowledge of mechanics, electronics, and manufacturing processes are important factors in maintaining a machine or plant on-line at full operation.

CURRICULUM REQUIREMENTS

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-MAT	101	Technical Mathematics	5	0	5
T-PHY	101	Physics: Properties of Matter	3	2	4
T-DFT	101	Technical Drafting	0	6	2
T-ELC	101	Fundamentals of Electricity	4	7	6
			15	15	20
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-MAT	102	Technical Mathematics	5	0	5
T-PHY	102	Physics: Work, Energy, Power	3	2	4
T-DFT	102	Technical Drafting	0	6	2
T-ELC	102	Fundamentals of Electricity	4	6	6
			15	14	20
THIRD QUARTER					
T-MEC	101	Machine Processes	3	0	3
T-MAT	103	Technical Mathematics	5	0	5
T-ELN	101	Electronic Instruments & Measurements	2	8	4
T-ELN	105	Control Devices	5	6	7
			15	14	19

FOURTH QUARTER

T-PHY	209	Physics	3	2	4
T-CHM	111	General Chemistry	4	3	5
T-MEC	241	Pneumatic Control Devices I	1	4	3
T-MEC	240	Measuring Principles	1	3	3
T-ELN	205	Applications of Vacuum Tubes & Transistors	5	4	7
			—	—	—
			14	16	22

FIFTH QUARTER

T-ENG	103	Report Writing	3	0	3
T-ELN	217	Calibration and Standardization	2	3	3
T-CHM	211	Physical Chemistry	2	3	3
T-MEC	242	Pneumatic Control Devices II	1	6	4
		Elective			5
			—	—	—
			8	12	18

SIXTH QUARTER

		Social Science Elective	3	0	3
T-ELN	226	Control System Analysis	3	6	5
T-ELN	228	Instrumentation Projects—Electronics & Pneumatic	2	6	4
		Elective			4
			—	—	—
			8	12	16
		Required Course Hrs.			102
		Electives			12
					——
		Total			114

EXECUTIVE SECRETARY

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.

MEDICAL SECRETARY

The graduate of the Medical Secretary Curriculum should have a knowledge of medical terminology, skill in dictation and accurate transcription of medical letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary in addition to taking dictation and transcribing is given more responsibility in connection with meeting office callers and screening telephone calls.

The requirements for the medical secretarial degree differs from the executive secretarial degree only in shorthand and dictation terminology.

LEGAL SECRETARY

The graduate of the Legal Secretary Curriculum should have a knowledge of legal terminology, skill in dictation and accurate transcription of legal records, reports, letters, and documents. The duties of a legal secretary may consist of taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. Opportunities of employment of the graduate exist in a variety of secretarial positions in the legal profession such as in lawyers' offices and state and government offices.

The requirements for the legal secretarial degree differ from the executive secretarial degree only in shorthand and dictation terminology.

EXECUTIVE SECRETARY

CURRICULUM REQUIREMENTS

1974

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-MAT	110	Business Mathematics	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-BUS	102	Typewriting	2	3*	3
T-BUS	106	Shorthand	3	2	4
			—	—	—
			18	5	20

SECOND QUARTER

T-ENG	102	Composition	3	0	3
T-BUS	103	Typewriting	2	3*	3
T-BUS	107	Shorthand	3	2	4
T-BUS	110	Office Machines	2	2	3
T-BUS	115	Business Law	3	0	3
T-BUS	120	Accounting	3	2	4
			16	9	20

THIRD QUARTER

T-ENG	206	Business Communication	3	0	3
T-BUS	104	Typewriting	2	3*	3
T-BUS	108	Shorthand	3	2	4
T-BUS	112	Filing	3	0	3
T-BUS	183	(E,M,L) Vocabulary & Terminology (elective)	(3)	(0)	(3)
T-BUS	199	Introduction to Transcription (elc)	(3)	(0)	(3)
			17	5	19

FOURTH QUARTER

T-ENG	204	Oral Communication	3	0	3
T-BUS	134	Personal Development (elective)	(3)	(0)	(3)
T-BUS	206	Dictation and Transcription	3	2	4
T-BUS	211-N	Office Machines (Duplicating)	2	2	3
T-BUS	212	(E,M,L) Machine Transcription (elc)	(3)	(2)	(4)
T-BUS	258	Typewriting-Speed Building (elc)	(2)	(3)*	(3)
			16	9	20

FIFTH QUARTER

T-ENG	103	Report Writing	3	0	3
T-BUS	205	Advanced Typewriting	2	3*	3
T-BUS	207	Dictation and Transcription	3	2	4
T-BUS	213	Advanced Machine Transcription (elc)	(3)	(2)	(4)
T-BUS	214	Secretarial Procedures	3	2	4
			14	9	18

SIXTH QUARTER

T-EDP	104	Introduction to Data Processing	5	0	5
T-PSY	206	Psychology-Social Science (elc)	(3)	(0)	(3)
T-BUS	208	Dictation and Transcription	3	2	4
T-BUS	215	Office Application	1	10	6
T-BUS	271	Office Management	3	0	3
			14	12	20

Required course hrs.	95
Elective hrs. required	10
Total	105

* Manipulative Laboratory
(elc) Elective

TRANSPORTATION MAINTENANCE

There is a growing need for transportation maintenance technicians to rebuild, test and service automotive units including diesel engines. The Service Managers Committee of the American Motors Association estimates that 45 to 50 thousand mechanics and technicians are needed each year to keep service shops properly manned. However, fewer than 10,000 recruits are entering the profession annually.

North Carolina, in its tremendous industrial growth, feels the need for more highly trained and skilled personnel in the automotive and transportation field. Industry is dependent upon transportation for movement of raw materials and finished products. Automotive units and diesel engines are prime movers, and require technicians to service and maintain them for proper operation. This curriculum has been developed to train technicians for the transportation maintenance field.

The Transportation Maintenance Curriculum is designed for students who are interested in work on or related to motor vehicles. This curriculum provides for entrance into technician level employment areas. Principles of design and operation provide for an exact appreciation of the functions of automotive units. Correlated laboratory work develops ability to execute or supervise diagnostic tests and repairs.

CURRICULUM REQUIREMENTS

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
T-MEC	101	Machine Processes	0	3	1
T-AUT	101	Internal Combustion Engines	3	12	7
T-MAT	101	Technical Mathematics	5	0	5
T-ENG	101	Grammar	3	0	3
T-PHY	101	Physics: Properties of Matter	3	2	4
			14	17	20
SECOND QUARTER					
T-MEC	102	Machine Processes	1	4	2
T-AUT	121	Automotive Electrical Systems	5	10	8
T-DFT	111	Blueprint Reading and Sketching	0	3	1
T-ENG	102	Composition	3	0	3
T-PHY	102	Physics: Work, Energy, Power	3	2	4
			12	19	18

THIRD QUARTER

T-AUT	125	Chassis Systems	3	7	5
T-AUT	226	Braking Systems	6	6	8
T-PSY	206	Applied Psychology	3	0	3
T-AHR	101	Fundamental of Refrigeration	2	3	3
			14	16	19

FOURTH QUARTER

T-AUT	220	Power Trains (Non-Automatic)	3	9	6
T-AUT	230	Auto Servicing	3	12	7
T-AUT	240	Motor Vehicle Laws and Regulations	3	0	3
			9	21	16

FIFTH QUARTER

T-AUT	213	Diesel Engines	4	6	6
T-MEC	235	Hydraulics & Pneumatics	3	3	4
T-CHM	201	Chemistry (Emmission Controls)	3	3	4
			10	12	14

SIXTH QUARTER

T-AUT	226	Braking Systems	2	3	3
T-AUT	231	Diagnosis & Testing	2	8	5
T-AUT	220	Engine Cooling & Lubrication	3	3	4
T-ENG	204	Oral Communication	3	0	3
			10	14	15

SEVENTH QUARTER

T-AUT	221	Power Trains (Automatics)	3	9	6
T-PHY	209	Physics (Thermodynamics)	3	2	4
T-WLD	201	Welding (Acetylene)	1	4	2
T-WLD	202	Welding (Arc)	1	4	2
			8	19	14

EIGHTH QUARTER

T-AUT	236	Air Conditioning	2	3	3
T-AUT	232	Diagnosis & Testing	2	8	5
T-AUT	243	Vehicle Shop Management	3	0	3
T-AUT	238	Component Servicing (elective)	0	6	2
			7	17	13
		Total Quarter Hours in Course			
		Total Course Hours Required			125

TECHNICAL COURSE DESCRIPTIONS

The contents of Technical courses are outlined in the following course descriptions. First year courses are numbered 100 through 199 and second year courses from 200 through 299. Courses should be pursued in normal sequence with prerequisite courses taken as indicated.

One quarter hour of credit is earned for a class meeting one hour each week for the duration of the quarter with the exception of regular laboratories and "manipulative laboratories." A "manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour is given for every three of these laboratory hours: one quarter hour is given for each two regular laboratory hours.

Provided for each course is the following information: subject number, title, number of hours of credit and in parentheses, the number of lecture hours and the number of laboratory hours each week.

AGRICULTURE

AGR 103 Feeding and Management **Credit 2(2-0)**

A study of applied principles and concepts and animal nutrition. Problems associated with feeding livestock, nutritional diseases, balancing rations, feed additives, feedstuffs, anatomy and physiology of the digestive systems of farm animals. The study includes management and economic problems associated with the feeding and marketing of livestock.

AGR 104 Introduction to Agricultural Economics **Credit 4(3-2)**

An introduction to economics, the functions of the economic system, and agriculture's role in the economy. A review of the functions of the manager, and an introduction to the principles he uses in making decisions to adjust to changing conditions. Analysis of the main sources of change which affect agricultural firms.

AGR 105 Pastures and Forage Crops **Credit 2(2-0)**

A study of the major grasses and legumes of economic importance in North Carolina. Attention will be given to management, soil types, fertilization, harvesting and nutrient value.

AGR 106 Pastures and Forage Crops Workshop **Credit 2(0-6)**

Field application of pastures and forage crop production techniques to accompany classroom instruction.

AGR 119 Techniques of Welding **Credit 2(1-3)**

Principles of oxyacetylene and electrical welding, cutting and brazing. Principles, procedures, safety precautions and experience in using oxyacetylene and arc equipment. Projects are assigned to develop skill in the use of equipment. Includes the study of metals, rods, gases, and special electric welding machinery.

AGR 125 Animal Science **Credit 5(3-4)**

An introductory animal science course covering the fundamental principles of livestock production. A study of the animal body and the basic principles of reproduction, genetics, growth, fattening, and digestion along with the selection, feeding improvement, processing, and marketing of livestock.

AGR 126 Farm Forest Management **Credit 2(2-0)**

A course dealing with the fundamentals of forestry and farm forestry problems, including planting, thinning, harvesting and marketing.

AGR 127 Animal Nutrition **Credit 3(2-2)**

A course dealing with the principles of nutrition and their application to feeding practices of cattle, horses, sheep and swine production in North Carolina.

AGR 128 Farm and Home Construction **Credit 4(2-4)**

This course deals with the fundamentals of farm carpentry, fences, concrete and masonry. Part of the course gives students an opportunity to learn and practice home construction projects such as kitchen cabinets. The study also includes the farm water needs and waste disposal. Attention is given to planning farm water and plumbing systems and their proper care and maintenance.

AGR 136 Agricultural Mathematics **Credit 2(2-0)**

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes and pertinent uses of mathematics in the field of business.

AGR 155 Plant Pathology **Credit 3(2-2)**

A course dealing with basic principles of efficient classification, evaluation and management of soils; care, cultivation and fertilization of the soil and conservation of soil fertility.

AGR 170 Plant Science **Credit 5(3-4)**

An introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of seed bearing plants with application to certain commercially important plants in North Carolina.

AGR 185 Soil Science and Fertilizers **Credit 5(3-4)**

A course dealing with the basic principles of efficient classification, evaluation, and management of soils; care, cultivation and fertilization of the soil, and conservation of soil fertility.

AGR 187 Fertilizers and Lime **Credit 3(2-2)**

A review of the source, function, and the use of the major and minor plant food elements; commercial fertilizer ingredients; soil acidity, liming materials; application of fertilizer and liming materials.

AGR 199 Cooperative Work Experience **Credit 4(0-40)**

This course consists of one quarter of supervised cooperative work experience of approximately 11 weeks at 40 hours each, or approximately 440 total hours awarding 4 quarter hours credit. The objective of this course is to provide the student—before graduation from his curriculum—a real working practice in an environment in which he will experience after graduation and upon employment.

This period of time will enable the student to use the equipment and perform the processes and services required of his specialty under close supervision and with responsibilities commensurate with his capabilities. The cooperative work experience period will be carefully planned and closely supervised by both the educational institution where the student is enrolled and the agency or business where the student is employed. An official agreement among the educational institution, the student, and the agency or business will provide for a programmed sequence of activities to be performed by the student with supervisory responsibilities for the educational elements of the work clearly defined.

AGR 201 Agricultural Chemicals **Credit 3(2-2)**

A study of agricultural chemicals—their importance, ingredients, formulation, and application with emphasis upon the effective and safe utilization of chemicals in agricultural pest control. Major emphasis is placed upon weed identification and those chemicals utilized for weed control. Part of the course is devoted to those chemicals other than herbicides—such as insecticides, fungicides, and others.

AGR 204 Farm Business Management **Credit 4(3-2)**

A review of the functions of the manager of a business firm and the problems he faces. Development of the concept of planning by both partial and complete budgeting. Review of the concepts of costs and the length of run in production. Practice in preparing enterprise budgets as an aid in choosing what to produce. Use of partial budgeting to find the least cost production procedure. Analysis of production data to select the level of production that yields the most net revenue. Relationship between size, efficiency and income of a farm. Review of procedures for evaluating the efficiency of the manager.

AGR 205 Agricultural Marketing **Credit 3(2-2)**

An analysis of the functions of marketing in the economy and a survey of the problems marketing faces. A review of the market structure and the relationship of local, terminal, wholesale, retail, and foreign markets. Problems in the operations of marketing firms—including buying and selling, processing, standardization and grading, risk taking and storage, financing, efficiency, and cooperation. Discussion of procedures of marketing such commodities as gain, cotton, livestock, and tobacco.

AGR 206 Agricultural Finance **Credit 2(2-0)**

Analysis of the capital structure of modern commercial agriculture with emphasis upon the sources of credit. A review of lending institutions, repayment schedules, and credit instruments. Practice in the procedure of evaluating farm resources with attention to information needed for resource valuation, appraisal farms and procedures, discounting, and depreciation.

AGR 207 Farm Records and Taxes **Credit 3(2-2)**

An introductory course to accounting methods related to the farm business which acquaints the student with terminology, basic principles and techniques used in recording transactions. Practical application of the principles learned are made by working with actual farm situations. A study of taxes as related to farm incomes, forms, deduction, depreciation, and tax schedules applicable to farmers.

AGR 215 Farm Machinery, Repair, and Maintenance **Credit 4(2-4)**

Care, repair, and selection of the large units of farm equipment operating principles of self-propelled and tractor-drawn equipment will be studied in the classroom and the field. Such equipment as balers, combines, corn pickers, cotton pickers and peanut harvesters will be included.

AGR 218 Agricultural Mechanization **Credit 3(2-2)**

A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed grinders and mixers, storage facilities, materials handling systems, and other labor-saving devices.

AGR 220 Farm Electrification Workshop **Credit 2(0-6)**

Practical application of farm electrification techniques to accompany classroom instruction.

AGR 222 Farm Electrification **Credit 3(2-2)**

A study of the basic principles and systems and their application to agricultural production with emphasis upon equipment for controlling the utilization of electricity.

AGR 226 Swine Production **Credit 3(2-0)**

Development of the swine producing and marketing industries, principles and practices of selection, breeding, feeding, housing, marketing and management of swine.

AGR 227 Beef Production **Credit 2(2-0)**

A study of the principles of selection, breeding, feeding, care and management of beef cattle.

AGR 228 Livestock Diseases and Parasites **Credit 3(2-2)**

A Course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis upon the cause, damage, symptoms, prevention, and treatment of parasites and diseases; management factors relating to disease and parasite prevention and control

AGR 245 Crop Insects **Credit 3(2-2)**

A study of common local crop insects, their economic importance, identification, life cycle and host. Student field trips studying insect damage will be stressed.

AGR 271 Field Crops **Credit 2(2-0)**

A study of the characteristics of field crops relative to varieties, environmental factors, rotations, fertilization, control of pests and cultural practices pertinent to crop production.

AGR 272 Tobacco Production **Credit 3(2-2)**

A review of the economic importance of tobacco in North Carolina and a detailed study of all aspects of the production and marketing of tobacco with a brief look at the processing and manufacturing phases.

AGR 275 Tobacco Production Workshop **Credit 2(0-6)**

Field application of tobacco production techniques to accompany classroom instruction.

AGR 278 Weed Identification and Control Credit 3(2-2)

A study of the identification and control of the annual and perennial weeds of economic importance in North Carolina.

AGR 290 Soil and Water Conservation Credit 4(2-4)

An introduction to soil and water conservation, covering what is included and who is involved in soil, water, and plant conservation, the available resources to carry out soil and water conservation measures, and the relationship of specialized knowledge in agronomy, biology, economics, engineering, soils, forestry, and receration.

AGR 295 Agricultural Law Credit 2(2-0)

A general course designed to acquaint the student with certain fundamentals and principles of law, including contracts, agency, and negotiable instruments. Includes the general study of law pertaining to partnership, corporation, sales, suretyship, bailments, and real property.

AGR 296 Agricultural Programs and Agencies Credit 3(2-2)

A review of the public agricultural programs and agencies that provide services, including financial aid for agricultural producers. The objectives, organization, functions and services of these organizations.

AIR CONDITIONING

T-AHR 101 Fundamentals of Refrigeration Credit 3(2-3)

Terminology, laws of refrigeration, absolute pressure and absolute temperature, energy conversion units; specific heat, latent heat, and sensible heat; measurement of heat in quantity and intensity; tone of refrigeration, pressure temperature relationships, transfer of heat by conduction, convection and radiation; elementary refrigeration, refrigeration cycle and refrigerant controls. Tools, materials and methods applicable to air conditioning, and refrigeration.

Prerequisite: None

T-AHR 106 Architectural Mechanical Equipment Credit 4(3-3)

General study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Building code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings by mechanical engineers. Coordination of mechanical and electrical features with structural and architectural designs.

Prerequisite: None

AUTOMOTIVE

T-AUT 101 Internal Combustion Engines Credit 7(3-12)

Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performances; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing diagnosing and repairing.

Prerequisite: None

T-AUT 121 Automotive Electrical Systems **Credit 8(5-10)**

A study of electrical principles specifically related to the motor vehicle industry. Stress is placed on the construction, operation, and service of the following items: battery, generator, alternator, ignition system, wiring circuits, and voltage and current control devices. The student will receive instruction in the use of testing equipment and special tools used on electrical components. Laboratory correlates theory and practice in the actual use of equipment for testing and adjusting.

T-AUT 125 Chassis Systems **Credit 5(3-7)**

The principles of wheel and chassis alignment, suspension systems, static and dynamic wheel balancing, and steering geometry. The laboratory will include power steering units and other chassis units for investigation of theory, practice and design.

Prerequisite: None

T-AUT 213 Diesel Engines **Credit 6(4-6)**

A study of injector pumps, fuel injectors, diesel fuels, and high compression diesel engines, two and four cycle.

Prerequisite: PME-1101

T-AUT 220 Engine Cooling & Lubrication **Credit 4(3-3)**

This course is designed to stress the necessity of proper maintenance to acertain the engines heat dissipation and lubrication.,

Prerequisite: PME-1101

T-AUT 221 Power Trains (Automatics) **Credit 6(3-9)**

The study of bevel, spiral, worm, hypoid, and planetary gearing; rear axle design including positive traction units, driveshafts, universal joints; fluid couplings, torque convertors, servos, and control units as applied to the automatic transmission. The laboratory correlates theory and practice using various manufacturer's units.

Prerequisite: AUT-1124

T-AUT 226 Braking Systems **Credit 3(2-3)**

A complete study of various braking systems employed on highway vehicles. Emphasis is placed on theory, adjustments, and major repairs.

Prerequisite: AUT-1121

T-AUT 230 Auto Servicing **Credit 7(3-12)**

Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems providing a full range of experience in testing, adjusting, repairing, and replacing.

Prerequisite: First year Transportation Maintenance or equivalent

T-AUT 231 Diagnosis & Testing **Credit 5(2-8)**

A thorough study and application of locating problems and determining the proper repair.

Prerequisite: PME-1102

T-AUT 232 Diagnosis and Testing **Credit 5(2-8)**

Diagnostic testing procedures are emphasized in determining the nature of troubles that develop in various component systems found in motor transportation units. A thorough study and application of testing methods, equipment use, and the interpretation of test results. Outside reading concerning the latest test procedures and research performed by major companies will be assigned and discussed. Related laboratory studies will involve test runs, analysis of data and corrective maintenance.

Prerequisite: T-AUT 231

T-AUT 236 Automotive Air Conditioning **Credit 3(2-3)**

A general introduction to the principles of refrigeration. A study of the assembly components and corrections necessary in the unit as applied to automobiles and trucks. The methods of operation and control. Safety precautions in the handling of refrigerants. Laboratory instruction includes installation and service of the air conditioning unit and repair.

Prerequsite: AHR-1101

T-AUT 238 Component Servicing **Credit 2(0-6)**

This course is designed to allow students to specialize in particular types of repair work. Each student can work on components of his choice. Instructors will supervise and give assistance when needed.

Prerequisite: Automotive Mechanics

T-AUT 240 Motor Vehicle Laws and Regulations **Credit 3(3-0)**

A basic study of motor vehicle laws and regulations of North Carolina including the state inspection requirements. An overview of interstate and intrastate I.C.C. and liability insurance requirements pertaining to motor carriers.

Prerequisite: None

T-AUT 243 Vehicle Shop Management **Credit 3(3-0)**

A comprehensive study of shop planning and layout, including problems relating to equipment, operational cost, organizations, insurance, public relations. Customer repair orders, factory warranty forms, and scheduling.

Prerequisite: None

BUSINESS

T-BUS 101 Introduction to Business **Credit 5(5-0)**

A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management.

Prerequisite: None

T-BUS 102 Typewriting **Credit 3(2-3)**

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation and manuscripts.

Prerequisite: None

T-BUS 103 Typewriting **Credit 3(2-3)**

Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms.

Prerequisite: T-BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.

T-BUS 104 Typewriting **Credit 3(2-3)**

Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms.

Prerequisite: T-BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.

T-BUS 106 Shorthand **Credit 4(3-2)**

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases.

Prerequisite: None

T-BUS 107 Shorthand **Credit 4(3-2)**

Continued study of theory with greater emphasis on dictation and elementary transcription.

Prerequisite: T-BUS 106 or the equivalent

T-BUS 108 Shorthand **Credit 4(3-2)**

Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription.

Prerequisite: T-BUS 107

T-BUS 110 Office Machines **Credit 3(2-2)**

A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, printing calculator, and electronic calculators—display and printing.

Prerequisite: None

T-BUS 112 Filing **Credit 3(3-0)**

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing.

Prerequisite: None

T-BUS 115 Business Law **Credit 3(3-0)**

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

Prerequisite: None

T-BUS 116 Business Law **Credit 3(3-0)**

Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights.

Prerequisite: T-BUS 115

T-BUS 120 Accounting I **Credit 4(3-2)**

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.

Prerequisite: T-MAT 110

T-BUS 121 Accounting II **Credit 4(3-2)**

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting of data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.

Prerequisite: T-BUS 120

T-BUS 122 Accounting III **Credit 4(3-2)**

The study of corporations, departments, branches, budget control, decision making, and statement analysis. Emphasis is placed on recording, summarizing and interpreting accounting data.

Prerequisite: T-BUS 121

T-BUS 123 Business Finance **Credit 3(3-0)**

Financing of business units, as individual, partnerships, corporations, and trusts. A detailed study is made of short-term, and consumer financing.

Prerequisite: None

T-BUS 124 Business Finance **Credit 3(3-0)**

Financing federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies.

Prerequisite: T-BUS 123

T-BUS 134 Personal Development **Credit 3(3-0)**

Designed to help the student recognize the importance of physical, intellectual, social, and emotional dimensions of personality. Emphasis placed on poise, grooming and methods of personal improvement.

Prerequisite: None

T-BUS 183E Vocabulary and Terminology—Executive **Credit 3(3-0)**

This course is designed to build the fluency and the command of the student's vocabulary. Drills in spelling, pronunciation, syllabication, and definitions of words found in the vocabulares of various types of businesses are included in the course.

T-BUS 183L Vocabulary and Terminology—Legal **Credit 3(3-0)**

This course is designed to familiarize the student with the most-commonly-used words in all phases of legal work. Included in this course are drills in spelling, pronunciation, and definitions of legal terms.

T-BUS 183M Vocabulary and Terminology—Medical **Credit 3(3-0)**

This course is designed to familiarize the student with the medical prefixes, suffixes, and the principles for making compounds, as well as the spelling, pronunciation, and definitions ofthe most-commonly-used words in medical practice.

T-BUS 199 Introduction to Transcription **Credit 3(3-0)**

This course integrates the necessary skills for transcribing dictated material at a typewriter.

T-BUS 205 Advanced Typewriting **Credit 3(2-1)**

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents.

Prerequisite: T-BUS 104. Speed requirement, 50 words per minute for five minutes.

T-BUS 206 Dictation and Transcription **Credit 4(3-2)**

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material.

Prerequisite: T-BUS 108

T-BUS 207 Dictation and Transcription **Credit 4(3-2)**

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material.

Prerequisite: T-BUS 206

T-BUS 208 Dictation and Transcription **Credit 4(3-2)**

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material.

Prerequisite: T-BUS 207

T-BUS 211-N Office Machines (Duplicating) **Credit 3(2-2)**

Instructions in reprographic processes—fluid duplicator, mimeograph, offset and photo copiers including the Executive typewriter.

T-BUS 212E Machine Transcription **Credit 4(3-2)**

Executive. A beginning course in machine transcription. The student learns to operate various transcription equipment to produce mailable copies.

Prerequiste: T-BUS 104

T-BUS 212M Machine Transcription **Credit 4(3-2)**

Medical. A study and practice course in machine transcription using various medical and surgical forms, reports, and case histories from medical belts.

Prerequisite: T-BUS 104

T-BUS 212L Machine Transcription **Credit 4(3-2)**
Legal. A course in machine transcription in which the students learn to transcribe mailable copies of legal letters, reports, and various legal forms.

Prerequisite: T-BUS 104

T-BUS 213 Machine Trancsription **Credit 4(3-2)**
Advanced. An advanced course in machine transcription.

Prerequisite: T-BUS 212

T-BUS 214 Secretarial Procedures **Credit 4(3-2)**
Designed to acquaint the student with the responsibility encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.

Prerequisite: None

T-BUS 215 Office Application **Credit 6(1-10)**
During the sixth quarter only, students are assigned to work in a business, technical, or professional office for ten hours per week. The objective is to provide actual work experience for secretarial students and an opportunity for the practical application of the skills and knowledge previously learned, according to the course of study.

Prerequisite: T-BUS 205, T-BUS 211

T-BUS 217 Business Law **Credit 3(0-3)**
A study of the powers, policies, methods, and procedures used by the various federal, state and local administrative agencies in promoting and regulating business enterprises. It includes a consideration of the constitutional and statutory limitations on these bodies and judicial review of administrative action.

Prerequisite: T-BUS 116

T-BUS 219 Credit Procedures and Problems **Credit 3(0-3)**
Principles and practices in the extension of credit; collection procedures; laws pertaining to credit extension and collection are included.

Prerequisite: T-BUS 120

T-BUS 222 Intermediate Accounting I **Credit (4(3-2)**
Thorough treatment of general accounting including the balance sheet, the income statement, and principles and practices involved in handling cash and temporary investments, receivables and inventories.

Prerequisite: T-BUS 122

T-BUS 223 Intermediate Accounting II **Credit 4(3-2)**
Additional study of intermediate accounting with special emphasis on investments, land, buildings and equipment, intangible assets, liabilities, paid-in capital and retained earnings.

Prerequisite: T-BUS 222

T-BUS 225 Cost Accounting I **Credit 4(3-2)**

Nature and purpose of cost accounting; accounting for materials, labor and factory overhead expense; job order cost principles and procedures.

Prerequisite: T-BUS 121

T-BUS 226 Cost Accounting II **Credit 4(3-2)**

Process cost accounting principles and procedures; standard cost accounting for materials, labor and factory overhead; managerial cost applications.

Prerequisite: T-BUS 225

T-BUS 229 Taxes **Credit 4(3-2)**

Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance.

Prerequisite: T-BUS 212

T- BUS 232 Sales Development **Credit 3(3-0)**

A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.

Prerequisites: None

T-BUS 233 Personnel Management **Credit 3(0-3)**

Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits and security.

Prerequisite: None

T-BUS 235 Business Management **Credit 3(3-0)**

Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements.

Prerequisite: None

T-BUS 239 Marketing **Credit 5(5-0)**

A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process.

Prerequisite: None

T-BUS 243 Advertising **Credit 4(3-2)**

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.

Prerequisite: None

T-BUS 245 Retailing **Credit 3(0-3)**

A study of the role of retailing in the economy including development of present retail structure, functions performed, principles governing effective operation and managerial problems resulting from current economic and social trends.

T-BUS 247 Business Insurance **Credit 3(0-3)**

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included.

T-BUS 252 Fundamentals of Real Estate **Credit 3(3-0)**

A survey course designed to provide both the beginner and the real estate practitioner with a basic knowledge of real estate. It includes the principles involved in real estate, finance, brokerage, appraising, real property law, and mechanics of closing.

T-BUS 253 Investment **Credit 3(3-0)**

This is a beginner's introduction to the fundamentals of investing. Course covers various aspects of marketplace including stocks, bonds, financial statements, securities mutual funds, etc.

Prerequisite: T-MAT 110

T-BUS 255 Interpreting Accounting Records **Credit 3(0-3)**

Designed to aid the student in developing a "use understanding" of accounting records, reports, and financial statements. Interpretation, analysis, and utilization of accounting statements.

Prerequisite: T-BUS 121

T-BUS 258 Typewriting—Speed Building 2 **Credit 3(2-3)**

Emphasis on speed building, correct stroking, technique development, rhythm drills, whole word improvement.

Prerequisite: T-BUS 102, 103, 104 or equivalent. Minimum speed requirement: 60 wpm for 5 minutes.

T-BUS 269 Auditing **Credit 4(3-2)**

Principles of conducting audits and investigations; setting up accounts based upon audits; collecting data on working papers; arranging and systemizing the audit, and writing the audit report. Emphasis placed on detailed audits, internal auditing, and internal control.

Prerequisite: T-BUS 223

T-BUS 271 Office Management **Credit 3(3-0)**

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems.

Prerequisite: None

T-BUS 272 Principles of Supervision **Credit 3(3-0)**

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed.

Prerequisite: None

CHEMISTRY

T-CHM 101 Chemistry **Credit 5(4-2)**

Study of the physical and chemical properties of substances, chemical changes; elements, compounds, gases, chemical combinations; weights and measurements; theory of metals; acids, bases, salts, solvents, solutions, and emulsions. In addition, study of carbohydrates; electrochemistry, electrolytes, and electrolysis in their application of chemistry to industry.

Prerequisite: T-MAT 101

T-CHM 111 General Chemistry **Credit 5(4-3)**

An introductory chemistry course involving chemical terminology, atomic structure, properties of some elements, and the function of the periodic table. Properties of work consists of various inorganic reactions and preparations.

Prerequisite: None

T-CHM 201 Chemistry (Emission Controls) **Credit 4(3-3)**

A thorough study of various smog control devices on gasoline and diesel powered vehicles.

Prerequisite: PME-1102

T-CHM 211 Physical Chemistry **Credit 3(2-3)**

A study of the measurement and control of the physical and chemical properties of the materials which are being processed and go to make up the final products. Examples: Density and specific gravity, viscosity, consistency, PH, conductivity, combustibility, etc.

Prerequisite: T-CHM 111

CIVIL

T-CIV 101 Surveying **Credit 4(2-6)**

Theory and practice of plane surveying including taping, differential and profile leveling, cross sections, earthwork computations, transit, stadia and transit-tape surveys.

Prerequisites: T-MAT 102, T-DFT 107

T-CIV 105 ARCHITECTURAL MATERIALS & METHODS **Credit (4(3-3)**

Material used in the construction of architectural structures will be studied. Field trips to construction sites and study of manufacturer's specifications for materials. Properties and standard sizes of structural materials, and construction techniques are included.

Prerequisite: None

T-CIV 114 Statics **Credit 5(5-0)**

Forces, resultants, and types of force systems; moments, equilibrium of coplanar forces by analytical and graphic methods; stresses and reactions in simple structures; equilibrium of forces in space; static and kinetic friction; center of gravity, centroids, and moment of inertia.

Prerequisite: T-MAT 102

T-CIV 216 Strength of Materials **Credit 4(3-2)**

Fundamental stress and strain relationship; torsion; shear and bending moments; stresses and deflections in beams; introduction to statically indeterminate beams; columns; combined stresses.

Prerequisites: T-CIV 114, T-MAT 103

DRAFTING

T-DFT 101 Technical Drafting **Credit 2(0-6)**

The field of drafting is introduced as the student begins study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, free-hand orthographic and pictorial sketching, geometric construction, and practices of dimensioning. The principles of isometric, oblique and perspective are introduced.

Prerequisite: None

T-DFT 102 Technical Drafting **Credit 2(0-6)**

The application of orthographic projection principles to the more complex drafting problems, primary and secondary auxilary views, simple and successive revolutions, and sections and conventions will be studied. Most important is the introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices for "details" and "working drawings", approved by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometrical objects.

T-DFT 103 Technical Drafting **Credit 2(0-6)**

Intersection and developments and their practical solutions. Where applicable, model solutions accompany the problems. The various techniques employed to produce and render isometric and oblique drawings, isometric, dimetric and trimetric projections, will be included.

Prerequisite: T-DFT 102

T-DFT 106 Architectural Drafting **Credit 4(2-4)**

A course designed to provide fundamental knowledge of the principles of drafting. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principle views. Projection problems dealing with principles of descriptive geometry involving points, lines, planes, and connectors. The principles of isometric, oblique and perspective drawings are introduced.

Prerequisite: None

T-DFT 107 Architectural Drafting **Credit 4(2-6)**

Development of techniques in architectural lettering, symbols, and their interpretation; dimensioning, freehand and instrument drafting. Drawing of construction details, using appropriate materials symbols and connections. Sections, scale details and full-size details will be prepared from preliminary sketches. Applications of descriptive geometry are used in visualization and analytical solutions of the drafting problems involving auxiliary views, intersections and developments.

Prerequisite: T-DFT 106

T-DFT 108 Architectural Drafting **Credit 3(0-9)**

An approach in depth to the study of architectural drafting. Development of techniques in architectural lettering, dimensioning, freehand sketching and instrument drawing. Drawings of construction details, using appropriate material symbols and conventions. Working drawings including plans, elevations, sections, scale details and full-size details will be prepared from preliminary sketches.

Prerequisites: T-DFT 107, T-AHR 106, T-CIV 105

T-DFT 111 Blueprint Reading and Sketching **Credit 1(0-3)**

Reading and interpretation of blueprints, drawings, charts, wiring diagrams, service manuals and associated information. Practice in free-hand sketching of wiring diagrams and parts using basic principles of lines, views, and dimensions.

Prerequisite: None

T-DFT 112 Electronic Drafting **Credit 3(2-3)**

The student will gain experience in executing the various types of electronic layouts, and he will become acquainted with the kind of electronic circuitry diagrams and graphic processes that are used by industry in electronic drafting. This course is intended primarily for second quarter drafting students enrolled in the electronics curriculum.

Prerequisites: T-DFT 101

T-DFT 115 Architectural Drafting **Credit 4(1-9)**

The use of line weights to produce sharper drawings for better reproduction.

T-DFT 116 Architectural Lettering **Credit 4(2-6)**

The selection of the best lead weight for lettering. The correct size lettering in relation to scale of drawing. The best location of lettering on the drawings.

T-DFT 201 Technical Drafting **Credit 4(2-6)**

Applications and constructions of charts, graphs, and nomographs in engineering and technical data. Screw threads, springs, keys, rivets, piping, and welding symbols, methods of representing and specifying will be covered. Basic mechanisms of motion transfer, gears and cams, will be studied and drawn with emphasis on methods of specifying, calculating, dimensions, and delineating.

Prerequisite: T-DFT 103.

T-DFT 204 Descriptive Geometry **Credit 4(2-4)**

Graphic analysis of space problems involving points, lines, planes, connectors, and a combination of these. Practical design problems will be stressed with analytical verification where applicable. Visualization shall be stressed on every problem.

Prerequisites: T-DFT 102, T-MAT 102

T-DFT 205 Design Drafting 1 **Credit 4(2-6)**

Basic design is introduced in the study of motion transfer mechanisms as they relate to power trains. Principles of design sketching, design drawing, layout drafting, detailing from layouts, production drawings and simplified drafting practices constitute areas of study. Types and methods of specifying materials and workmanship are an integral part of the course.

Prerequisites: T-DFT 204, T-MAT 102, T-PHY 102

T-DFT 206 Design Drafting II **Credit 4(2-6)**

Research to solve a problem in design by consulting various manuals, periodicals, and through laboratory experiments. A written technical report, preliminary design sketches, layout drawings, detail drawings, assembly and sub-assembly drawings, pictorial drawing, exploded pictorial assembly, patent drawings and specifications are required as a part of the problem.

Prerequisites: T-DFT 205, T-DFT 210

T-DFT 211 Mechanisms **Credit 4(3-2)**

Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within a link mechanism; layout methods for designing cams, belts, pulleys, gears and gear trains.

Prerequisites: T-DFT 201 & 204, T-MAT 103, T-PHY 106

T-DFT 220 Architectural Drafting **Credit 5(2-9)**

Drawing of structural plans and details as prepared for building construction including steel, concrete, and timber structural components. Appropriate details and drawings necessary for construction and fabrication of structural members. Reference materials will be used to provide the draftsman with skills and knowledge in locating data and in using handbooks.

Prerequisite: T-DFT 108

T-DFT 221 Architectural Drafting **Credit 5(2-9)**

Drawing of plans and details as prepared for mechanical equipment such as air conditioning, plumbing and electrical systems by using appropriate symbols and conventions. Consideration is given to coordination of mechanical and electrical features with structural and architectural components.

Prerequisite: T-DFT 220

T-DFT 222 Architectural Drafting **Credit 5(2-9)**

Preparation of the complete set of working drawings for the architectural structure. Preparation of millwork drawings, cabinets and built-in equipment detail drawings, and door, window, and room schedules. Site and landscaping plans will be studied and drawn. Final assembly of the complete document for construction purposes will be made.

Prerequisite: T-DFT 221, T-CIV 101, T-DFT 235

T-DFT 233 Office Practice Seminar **Credit 2(2-0)**

A study of the professional relationship of the architectural firm in relation to clients, contractors, suppliers, consultants, and other architects. Ethics of the profession applicable to the draftsman's role in the architectural firm will be stressed.

Prerequisite: None

T-DFT 235 Codes, Specifications and Contract Documents **Credit 4(3-3)**

A study of building codes and their effect in relation to specifications and drawings. The purpose and writing of specifications will be studied along with their legal and practical application to working drawings. Contract documents will be analyzed and studied for the purpose of client-architect-contractor responsibilities, duties, and mutual protection.

Prerequisite: T-DFT 220

T-DFT 236 Construction Estimating and Field Inspecting **Credit 4(3-3)**

Interpretation of working drawings for a project; preparation of material and labor quantity surveys from plans and specifications; approximate and detailed estimates of cost. The student will study materials take-off, subcontractors' estimates, overhead cost, and bid and contract procedures. Detailed inspection of the construction by comparing finished work to the specifications and drawings.

Prerequisite: T-DFT 235

T-DFT 237 Architectural Perspectives **Credit 4(2-4)**

It is of great advantage for the architectural draftsman to be able to draw objects as they appear to the casual observer. Perspective drawing is a pictoral method of representing a building or object, very much as the lens of a camera records an image on film.

The basic theory of perspective drawing assumes that the image is produced upon a transparent vertical plane, called the "picture plane", very much as the orthographic views are formed—the only difference being that the orthographic have parallel projectors, whereas the perspective views have projectors radiating from a single point, similar to the visual rays of a person's eye.

T-DFT 238 Architectural Rendering **Credit 4(2-4)**

The presentation is the designer's graphic concept of a building in its natural setting, made to represent the structure honestly, realistically, artistically, and in a manner easily understood by the layman.

Successful presentations are done in almost all of the different art media; the most frequently used are: Pencil, pen and ink, colored pencil, water color, tempro, pastel and charcoa pencil.

T-DFT 240 Model Building **Credit 4(2-6)**

Model Building is one of the more pleasant aspects of architecture and it has become an important creative expression for professionals as well as students. Many architects rely on 3-dimensional models for final evaluations of their designs and sometimes reserve work space in their offices exclusively for this interesting phase of their activity.

Architectural Models: Intended primarily to show the exterior appearance of the design only.

Structural Models: For models requiring a visual analysis of the structural system.

ECONOMICS

T-ECO 102 Economics **Credit 3(3-0)**

The fundamental principles of economics including the institutions and practices by which people gain a livlihood. Included is a study of the laws of .supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large.

Prerequisite: None

T-ECO 104 Economics **Credit 3(3-0)**

Greater depth in principles of economics, including a penetration into the composition and pricing of natural putput, distribution of income, international trade and finance, and current economic problems.

Prerequisite: T-ECO 102

T-ECO 108 Consumer Economics **Credit 3(0-3)**

Designed to help the student use his resources of time, energy, and money to get the most out of life. It gives the student an opportunity to build useful skills in buying, managing his finances, increasing his resources, and to understand better the economy in which he lives.

Prerequisite: None

T-ECO 201 Labor Economics and Labor Relations **Credit 4(3-2)**

Emphasis is placed on the history of the labor movement in the United States, the development of methods and strategies by labor organizations and by management, the shift in the means of public control, and the factors of income and economic security.

Prerequisite: T-ECO 104

ELECTRONIC DATA PROCESSING

T-EDP 104 Introduction to Data Processing Systems **Credit 5(0-5)**

Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses.

Prerequisite: None

T-EDP 106 Business Programming **Credit 2(4-4)**

The effective use of data processing equipment in meeting the information needs of business; utilizing the symbolic programming system as a tool in the solution of problems. The scope of the problems developed will vary from a modest payroll procedure to the total information retrieval for a large and complex business.

Prerequisites: T-EDP 104

ELECTRONICS

T-ELC 101 Fundamentals of Electricity **Credit 6(4-4 or 6)**

Elementary principles of electricity including: basic electric units, Ohms law, Kirchhoffs law, network theorems, magnetics, basic electrical measuring instruments, inductance, capacitance, sine wave analysis, and non-resonant resistive, inductive and capacitive networks.

Prerequisite: None

T-ELC 102 Fundamentals of Electricity **Credit 6(4-4 or 6)**

Series and parallel resonant-circuit analysis, resonant and non-resonant transformer analysis, basic diode power supply analysis, introduction to non-linear resistive control devices, and introduction to electromechnical devices.

Prerequisite: T-ELC 101

T-ELN 101 Electronic Instruments & Measurements **Credit 3(1-8)**

A study of basic electronic instruments, their theory of operation, maintenance, function, tolerances, and calibration. Both service and laboratory instruments will be studied. Laboratory experience will provide application of each type instrument studies.

Prerequisite: T-ELC 102

T-ELN 105 Control Devices **Credit 7(5-8)**

A study in depth of the electrical characteristics of vacuum tubes and transistors. Basic parameters and applications of each type device to the three configurations of a three terminal two-part system will be included.

Prerequisite: T-ELC 102

T-ELN 217 Calibration and Standardization **Credit 3(2-3)**

Course to illustrate the principles of measurement and control, emphasizing the meaning of validity, sensitivity and control devices, units of measurement, and levels of accuracy and trace ability.

Prerequisite: T-MEC 240

T-ELN 205 Applications of Vacuum Tubes and Transistors **Credit 5(4-7)**

Practical applications of vacuum tubes and transistors to basic audio amplifiers, radio frequency amplifiers, detectors, modulators and oscillators.

Prerequisite: T-ELN 105

T-ELN 226 Control System Analysis **Credit 5(3-6)**

A study of the response of systems to instrument control based upon consideration of the system components, Negative and positive feedback along with the implications of closed loop control are covered. Sequence of operation to include ladder diagrams and interlocks, logic diagrams, and relay circuits.

Prerequisite: T-ELN 101

T-ELN 228 Instrumentation Projects—Electronics & Pneumatic **Credit 4(2-6)**

Laboratory projects in electronic and pneumatic instrumentation to promote individual initiative and project responsibility. Involves a review of major concepts in previous courses. The student will have maximum opportunity to develop, evaluate, and carry his projects to a successful conclusion.

Prerequisite: T-MEC 240, T-MEC 242

ENGLISH

T-ENG 101 Grammar **Credit 3(3-0)**

Designed to aid the student in the improvement of self-expression. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

Prerequisite: None

T-ENG 102 Composition **Credit 3(3-0)**

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition.

Prerequisite: T-ENG 101

T-ENG 103 Report Writing **Credit 3(3-0)**

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

Prerequisite: T-ENG 102

T-ENG 204 Oral Communication **Credit 3(3-0)**

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T-ENG 101

T-ENG 206 Business Communication **Credit 3(3-0)**

Develops skills in techniques in writing business communications. Emphasis is placed on writing action-getting sales letters and prospectuses, business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiries.

Prerequisite: T-ENG 102

MATHEMATICS

T-MAT 101 Technical Mathematics **Credit 5(5-0)**

The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.

Prerequisite: Satisfactory evidence that admission requirements have been met.

T-MAT 102 Technical Mathematics **Credit 5(5-0)**

A continuation of T-MAT 101. A study of angles, triangles, powers of tem, basic geometry principles. Introduction to trigonometry and its principles.

Prerequisite: T-MAT 101

T-MAT 103 Technical Mathematics **Credit 5(5-0)**

Continuation of T-MAT 102. A study of vectors, using mathematical and graphic methods. Topics covered are: graphing, addition, notation, resultant force, sine, cosine, and velocity. Practice in depth. Logarithms may be covered if needed.

Prerequisite: T-MAT 102

T-MAT 110 Business Mathematics **Credit 5(5-0)**

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent used of mathematics in the field of business.

Prerequisite: None

T-MAT 201 Technical Mathematics **Credit 5(5-0)**

A continuation of T-MAT 103. More advanced concepts of differentiation and integration are considered. Included are graphs and derivatives of the trigonometric functions, exponential and logarithmic differentiation and integration, advanced integration techniques, polar equations, parametric equations, and Fourier series.

Prerequisite: T-MAT 103

MECHANICS

T-MEC 101 Machine Processes **Credit 2(0-6)**

An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

Prerequisite: None

T-MEC 102 Machine Processes **Credit 2(0-6)**

Advanced operations on lathe, drilling, boring and reaming machines. Milling machine theory and practice. Thorough study of the types of milling machines, cutters, jig and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed.

Prerequisite: T-MEC 101

T-MEC 205 Strength of Materials **Credit 4(3-2)**

Study of principles and analysis of stresses which occur within machine and structure elements subjected to various types of loads such as static, impact, varying and dynamic. Analyses of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns and machine components.

Prerequisites: T-PHY 106, T-MAT 103

T-MEC 210 Physical Metallurgy **Credit 4(3-3)**

Introductory course in metallurgy, a basic study of the properties of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Solid (crystal-line) structures, methods of designating crystal planes; liquid and vapor phases; phase diagrams; and alloy systems.

Prerequisite: T-PHY 101

T-MEC 211 Physical Metallurgy **Credit 4(3-3)**

Properties of metals and alloys, the reactions of metals, diffusion, carburizing, metal bonding and homogenization; recrystallization and grain growth, age hardening, nitriding, internal oxidation; heat treatment of steel; laboratory experiments and demonstrations.

Prerequisite: T-MEC 210

T-MEC 235 Hydraulics and Pneumatics **Credit 4(3-3)**

The basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing, filtration, accumulators and reservoirs.

Prerequisite: T-PHY 102

T-MEC 237 Control Systems **Credit 4(2-4)**

Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, applications and their utilization in industrial processes.

Prerequisites: T-PHY 102, T-ELC 201

T-MEC 240 Measuring Principles **Credit 2(1-3)**

A study of the more common sensing elements and components which are generally classified as mechanical instruments. The devices studied are those which are employed for measurement of temperature pressure, and related phenomena. Emphasis is placed upon the few basic principles which are used in a wide variety of instruments available for process control.

Prerequisites: T-MAT 103, T-PHY 102

T-MEC 241 Pneumatic Control Devices I **Credit 3(1-4)**

Emphasis is placed on fundamental theory of control and controller mechanisms. Application of certain pneumatic control mechanisms is also included in the course. Recorders, indicators, pressure regulators and air supply systems are covered.

Prerequisites: T-MAT 103, T-PHY 102

T-MEC 242 Pneumatic Control Devices II **Credit 4(1-6)**

A study of various types of controllers commonly found in system control. Transmitter theory, relays, values and value positioners will be covered in the course. Selection of hardware, sketching and reading instrument drawings and control loop design will be introduced.

Prerequisites: T-MEC 241

PHYSICS

T-PHY 101 Physics: Properties of Matter **Credit 4(3-2)**

A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and application. Laboratory experiments and specialized problems dealing with these topics are part of this course.

Prerequisite: None

T-PHY 102 Physics: Work, Energy, Power **Credit 4(3-2)**

The major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity, and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas.

Prerequisites: T-PHY 101, T-MAT 101

T-PHY 103 Physics: Electricity **Credit 4(3-2)**

Basic theories of electricity, types of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course.

Prerequisites: T-PHY 101, T-MAT 101

T-PHY 104 Physics: Light and Sound **Credit 4(3-2)**

A survey of the concepts involving wave motion leads to a study of sound, its generation, transmission and detection. The principles of wave motion also serve as an introduction to a study of light, illumination, and the principles involved in optical instruments. Application is stressed throughout.

Prerequisites: T-MAT 101, T-PHY 101

T-PHY 209 Physics (Thermodynamics) **Credit 4(3-2)**

A basic course to familiarize the student with the principles of thermodynamics. Topics include heat, temperature, work and the first and second laws of thermodynamics, with basic applications. Gases, vapor cycles, combustion, and the internal combustion engine are studied.

POLITICAL SCIENCE

T-POL 201 United States Government **Credit 3(3-0)**

A study of government with emphasis on basic concepts, structure, powers, procedures and problems.

Prerequisite: None

PSYCHOLOGY

T-PSY 206 Applied Psychology **Credit 3(0-3)**

A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings and emotions are considered with particular reference to on-the-job problems. Other topics in-are considered with particular reference to on-the-job problems. Attention is also given to personal and group dynamics.

Prerequisite: None

T-PSY 112 Personality Development **Credit 3(0-3)**

Designed to help the student recognize the importance of the physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on grooming and methods of personality improvement.

Prerequisite: None

SOCIAL SCIENCE

T-SSC 201 Social Science I **Credit 3(3-0)**

An integrated course in the social sciences, drawing from the fields of anthropology, psychology, history, and sociology.

Prerequisite: None

T-SSC 202 Social Science II **Credit 3(3-0)**

A further study of social sciences with emphasis on economics, political science, and social problems as they relate to the individual.

Prerequisite: T-SSC 201

T-SSC 205 American Institutions **Credit 3(3-0)**

A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national, and global problems viewed in the light of our political and economic heritage..

Prerequisite: None

WELDING

T-WLD 201 Welding (Acetylene) **Credit 2(1-4)**

Principles of oxyacetylene welding and cutting, and brazing. Basic principles proedures, safety, and experience in using arc welding equipment.

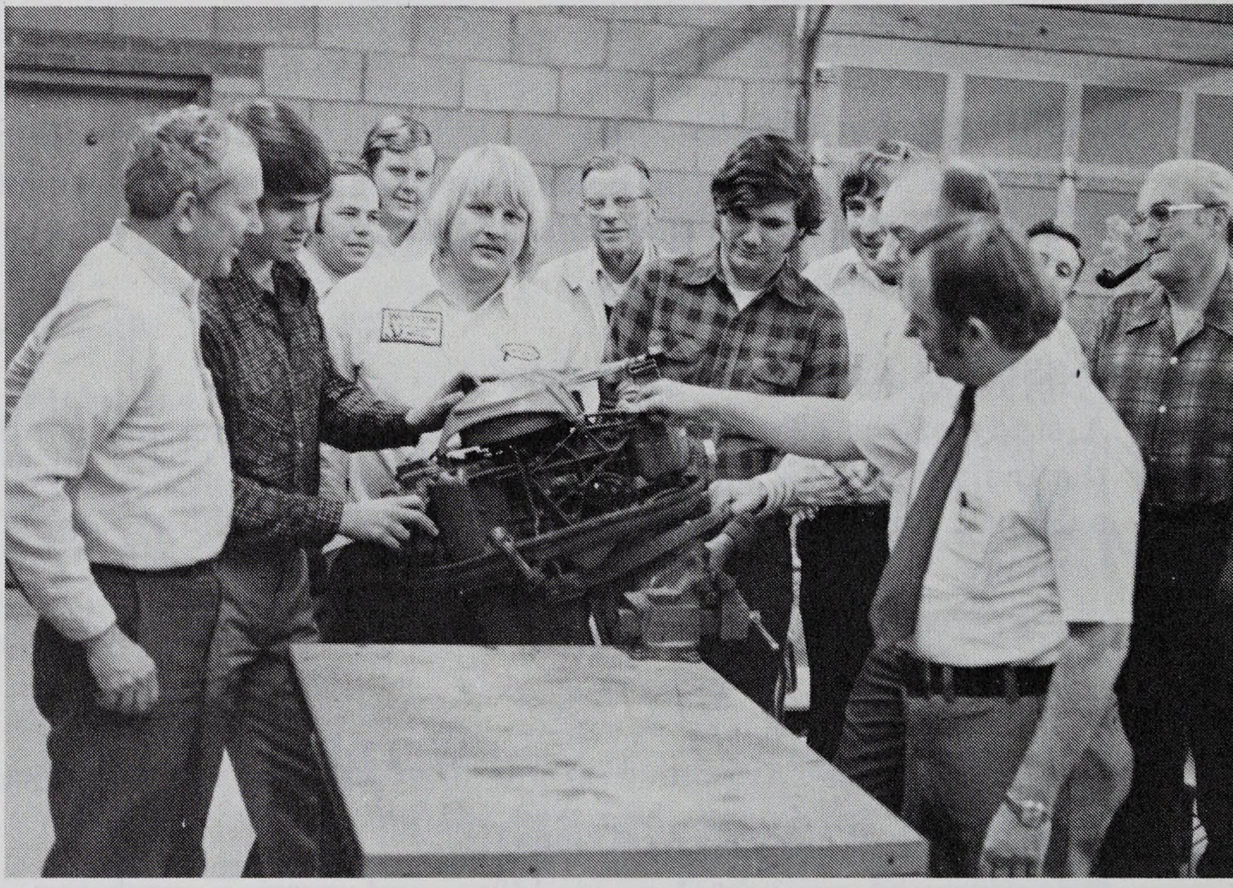
Prerequisite: None

T-WLD 202 Welding (Arc) **Credit 2(4-1)**

Introduction to arc welding techniques, the operation of AC and DC welding, and reverse polarity welding for case iron blocks and heads.

Prerequisite: None

Vocational Programs



THE VOCATIONAL DIVISION

The Vocational programs are designed to prepare people for entrance into a skilled occupation. These programs range from one to four quarters in length, depending upon the development of skills and job proficiency. Certificates are usually awarded on the completion of the one to three quarter programs, which include mainly courses in skill training. Diplomas are awarded upon the completion of the four quarter programs, which also include courses in communication skills and the social sciences directly related to the occupations goals of the programs. The occupational entry of the graduate is at the semi-skilled level, but his training will permit him to progress rapidly to the skilled or "craftsman" level.

AUTO BODY REPAIR

Graduates of the Auto Body Repair Curriculum are qualified for jobs in which they remove dents in automobile bodies and fenders; take off fenders and replace them with new ones; straighten frames, doors, hoods, and deck lids; and align wheels. In their work these craftsmen operate welding equipment. They also make tests on and repair engine cooling systems. Auto body repairmen shrink stretched metal and prepare it for painting. They are called on to paint fenders and/or panels as well as to paint a complete vehicle. In addition to these duties, auto body repairmen remove, cut, fit and install glass. They are required to remove and install interior trim; cut, sew, and install headings and seat covers; repair and replace upholstery and fabric tops of vehicles; and rebuild springs, and padding. This type of employment includes reading and interpreting blueprints, charts, instruction and service manuals, and wiring diagrams. These repairmen also prepare orders for repairs and parts as well as estimates and statements for adjusters. After gaining experience, many of these craftsmen open their own businesses or become body shop foremen, supervisors, or managers.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Hours Per Week Lab	Quarter Hours Credit
FIRST QUARTER					
AUT	1111	Auto Body Repair	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
PHY	1101	Applied Science	3	2	4
ENG	1101	Reading Improvement	2	0	2
WLD	1101	Basic Gas Welding	0	3	1
			13	17	19

SECOND QUARTER

AUT	1112	Auto Body Repair	3	13	7
WLD	1105	Auto Body Welding	0	3	1
DFT	1101	Schematics and Diagrams: Power mechanics	0	3	1
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			9	21	16

THIRD QUARTER

AUT	1113	Metal Finishing and Painting	3	13	7
PSY	1101	Human Relations	3	0	3
AUT	1115	Trim, Glass and Radiator Repair	2	9	5
			8	22	15

FOURTH QUARTER

AUT	1114	Body Shop Applications	3	24	10
BUS	1103	Small Business Operations	3	0	3
			6	24	13
		Total Quarter Hours in Course			63

AUTOMOTIVE MECHANICS

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some communities and rural areas they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
AUT	1101	Shop Practices	0	3	1
PME	1101	Internal Combustion Engines	3	12	7
MAT	1101	Math (Fundamentals of Mathematics)	4	0	5
ENG	1101	English (Reading Improvement)	3	0	3
PHY	1101	Physics (Applied Science)	3	2	4
			14	17	20
SECOND QUARTER					
MEC	1112	Machine Processes	1	4	2
PME	1102	Electrical & Fuel Systems	5	10	8
DFT	1101	Diagrams & Schematics	0	3	1
ENG	1102	English Communication Skills	3	0	3
PHY	1102	Physics (Applied Science)	3	2	4
			12	19	18
THIRD QUARTER					
AUT	1123	Chassis & Suspensions	3	7	5
AUT	1121	Brakes	6	6	8
PSY	1101	Human Relations	3	0	3
AHR	1101	Air Conditioning	2	3	3
			14	16	19
FOURTH QUARTER					
AUT	1124	Power Trains (Non-Automatic)	3	9	6
AUT	1125	Auto Servicing	3	12	7
BUS	1103	Small Business Operations	3	0	3
			9	21	16
		Required course hours			73

BUILDING TRADES-DRAFTING

A *draftsman* prepares clear, complete, and accurate working plans and detail drawings, from rough or detailed sketches or notes for building construction purposes, according to the specified dimensions: makes final sketch of the proposed drawing, checking dimension of parts, materials to be used, the relation of one part to another, and the relation of the various parts to the whole structure. Makes and adjustments or changes necessary or desired. Exercises manual skill in the manipulation of triangle, T-square, and other drafting tools. Makes finished designs from sketches. Utilizes knowledge of mathematics, building materials, other physical sciences to complete the drawings.

A *building trades draftsman* performs the general duties of a draftsman and also specializes in organizing and drawing of working drawings from final preliminary sketches from the designer, mechanical equipment and structural drawings included.

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week		Quarter Hours Credit
			Class	Lab	
FIRST QUARTER					
PHY	1121	Drafting	3	12	7
MAT	1103	Geometric Construction	3	0	3
DFT	1101	Reading Improvement	3	0	3
MAT	1101	Applied Science	3	2	4
ENG	1101	Fundamentals of Mathematics	5	0	5
			17	14	22
SECOND QUARTER					
DFT	1122	Drafting	3	9	6
AHR	1106	Architectural Mechanical Equipment	2	3	3
MAT	1102	Algebra	5	0	5
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			16	14	21
THIRD QUARTER					
DFT	1141	Building Trades Drafting	3	12	7
DFT	1144	Building Materials and Methods	3	3	4
CIV	1143	Building Mechanical Equipment	3	3	4
PSY	1101	Human Relations	3	0	3
			12	18	18

FOURTH QUARTER

DFT	1142	Building Trades Drafting	3	12	7
DFT	1145	Specifications and Contracts	3	4	4
DFT	1101	Surveying	2	3	3
BUS	1103	Small Business Operations	3	0	3
			—	—	—
			11	19	17
		Quarter Hours in Course			78

COSMETOLOGY

Today the cosmetologist is called upon to advise men and women on problems of make-up, diet, and care of the hair, skin and hands, including the nails. Cosmetology has become a science consisting of the use of cosmetics based on scientific principles. The Cosmetology Curriculum is designed to prepare the student for employment in the field of cosmetology. The curriculum provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, hair cutting and styling. This curriculum is approved by the North Carolina State Board of Cosmetic Art Examiners.

A trained beautician is in constant demand. He or she can find employment in the many beauty shops found in every community. A cosmetologist performs many functions in providing services for customers. Some of the functions are: manicuring, shampooing, permanent waving, facials, scalp treatments, hair styling, bleaching, and other services demanded of a beautician.

SUGGESTED SEQUENCE OF COURSES BY QUARTERS

Course Title			Hours Per Week Class	Lab	Total Hours Contact
FIRST QUARTER					
COS	1101	Introduction to Cosmetology	5	1	66
COS	1102	Bacteriology, Sanitation and First Aid	2	2	44
COS	1112	Personality	2	0	22
COS	1103	Shampoo and Rinse	1	2	33
COS	1105	Finger waving and pin curling	1	6	77
COS	1107	Manicuring	1	2	33
COS	1120	Facials	1	3	44
COS	1115	Tinting and Bleaching	1	4	55
			—	—	—
			14	20	374

SECOND QUARTER

COS	1106	Hair Shaping	1	6	77
COS	1111	Hair Styling and Wig Care	1	6	77
COS	1115	Tinting and Bleaching	1	3	44
COS	1110	Permanent Waving-Cold and Heat Wave	1	6	77
COS	1118	Anatomy	3	2	55
COS	1116	Scalp Treatments	1	1	22
COS	1105	Finger waving and pincurling	1	2	33
			9	26	385

THIRD QUARTER

COS	1119	Anatomy	2	4	66
COS	1121	Disorders of Skin, Nails, and Hair	4	2	66
COS	1123	Chemistry	2	1	33
COS	1122	Electricity	2	1	33
COS	1124	Operational Management	1	0	11
COS	1106	Hair Shaping	1	3	44
COS	1111	Hair Styling and Wig Care	1	4	55
COS	1110	Permanent Waving—Cold and Heat Wave	1	5	66
			14	20	374

FOURTH QUARTER

COS	1102	Bacteriology, sanitation and First Aid	3	0	33
COS	1105	Finger waving and pincurling	0	4	44
COS	1106	Hairshaping	0	6	66
COS	1110	Permanent Waving—Cold and Heat Wave	0	5	55
COS	1111	Hairstyling and wig care	1	7	88
COS	1115	Tinting and Bleaching	0	2	22
COS	1116	Scalp Treatments	0	1	11
COS	1120	Facials	0	2	22
COS	1121	Disorders, etc.	1	1	22
COS	1122	Electricity	1	0	11
			5	28	374
		Total Contact Hours in Course			1507

ELECTRICAL INSTALLATION AND MAINTENANCE

The Electrical Installation and Maintainence Curriculum is an organized study program that provides the fundamental concepts of electricity; the opportunity to develop skills in installation, operation, and inspection of electrical equipment; and the opportunity to apply the National Electric Code. The graduate from this program will be qualified as an apprentice to enter the electrical trades where he will assist in the planning, installation, checkout, and maintainence of residential, commercial, and industrial electrical equipment. Upon meeting North Carolina requirements for the necessary on-the-job experience, the apprentice can feel secure in taking the N. C. State examination to become a licensed electrician.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Hours Per Week Lab	Quarter Hours Credit
FIRST QUARTER					
ELC	1112	Direct and Alternating Current	5	13	9
ENG	1101	Reading Improvement	2	0	2
MAT	1115	Electrical Math	5	0	5
PHY	1101	Applied Science	3	2	4
			15	15	20
SECOND QUARTER					
ELC	1113	Alternating Current and Direct Current Machines and Controls	5	14	9
DFT	1110	Blueprint Reading: Building Trades	0	3	1
ENG	1102	Communication Skills	3	0	3
PHY	1102	Applied Science	3	2	4
			11	19	17
THIRD QUARTER					
ELC	1124	Residential Wiring	5	10	8
ELN	1118	Industrial Electronics	3	6	5
PSY	1101	Human Relations	3	0	3
DFT	1113	Blueprint Reading: Electrical	0	3	1
			11	19	17
FOURTH QUARTER					
ELC	1125	Commercial and Industrial wiring	5	13	9
ELN	1119	Industrial Electronics	3	6	5
BUS	1103	Small Business Operations	3	0	3
			11	19	17
		Total Quarter Hours in Course			71

ELECTRONIC SERVICING

The Electronics Servicing Curriculum is one which provides the fundamentals of electricity and electronics, and the opportunity for developing skills to install, service, and inspect electronics instruments. In addition to verifying electronics principles by laboratory work, practical experience will also be gained by applying servicing techniques in the shop. The graduate from this program may be required to install, service, inspect, or sell various types of electronics equipment. He may obtain employment as an electrical instrument repairman, radio and television serviceman, industrial electronics salesman or serviceman, a tester of product performance, or as a troubleshooter for industrial maintainence.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
MAT	1115	Electrical Mathematics	5	0	5
ENG	1101	Reading Improvement	2	0	2
ELC	1112	Direct & Alternating Current	5	18	11
			12	18	18
SECOND QUARTER					
MAT	1116	Electrical Mathematics	5	0	5
ENG	1102	Communication Skill	3	0	3
ELN	1122	Vacuum Tubes & Circuits	5	9	8
ELN	1123	Amplifier Systems	2	6	4
			15	15	20
THIRD QUARTER					
ELN	1125	Radio Receiver Servicing	2	6	4
ELN	1126	Transistor Theory & Circuits	4	15	9
PSY	1101	Human Relations	3	0	3
			9	21	16
FOURTH QUARTER OPTION					
ELN	1128	Television Receiver Circuits and Servicing	5	3	9
		Elective (1)	3	6	6
BUS	1103	Small Business Operations	3	0	3
			11	19	18
		Total Quarter Hours in Course			70

LICENSED PRACTICAL NURSE EDUCATION

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices, and, in some localities, public health facilities. In all situations the LPN functions under the supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understanding of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Hours Per Week Lab	Quarter Hours Credit
FIRST QUARTER					
Nursing	101	Fundamentals of Nursing I	6	6	8
Psychology	101	General Psychology	3	0	3
English	101	Composition	5	0	5
Biology	121 122A	Human Physiology & Anatomy	3	3	5
			17	9	21
SECOND QUARTER					
Nursing	102	Fundamentals of Nursing II	4	9	7
Biology	122B 123	Human Physiology & Anatomy	3	3	5
English	102	Composition II	5	0	5
Psychology	201	Psychology of Childhood	3	0	3
			15	12	20

THIRD QUARTER

Nursing	103	Maternal and Child Care	4	12	8
Sociology	110	Introduction to Sociology	5	0	5
Biology	110	Fundamentals of Microbiology	2	4	4
			11	16	17

FOURTH QUARTER

				Nursing	
	104	Nursing Care in Physical & Mental Illness I	8	18	14
		Required Course Hours			72

MASONRY

INTRODUCTION

Purpose of Curriculum

Masons are the craftsmen in the building trades that work with artificial stone, brick, concrete masonry units, stone and the like. During the past decade there has been a steady increase in the demand for these craftsmen. As building construction continues to increase, the demand for bricklayers, cement masons, and stonemasons will also increase.

This curriculum in Masonry is designed to train the individual to enter the trade with the knowledge and basic skills that will enable him to perform effectively. He must have a knowledge of basic mathematics, blueprint reading and masonry technology. He must know the methods used in laying out a masonry job with specific reference to rigid insulation, refractories, and masonry units specified for residential, commercial, and industrial construction.

Most employment opportunities for masons may be found with contractors in new building construction. However, a substantial proportion of masons are self employed or work with contractors doing repair, alteration, or modernization work.

Job Description

Most masons are employed by contractors in the building construction fields, to lay brick and blocks made of tile, concrete, glass, gypsum or terra cotta. Also, he constructs or repairs walls, partitions, arches, sewers, furnaces and other masonry structures.

After gaining experience in the various types of the masonry trade along with leadership training, it is possible for the tradesmen to become a foreman, inspector and eventually a contractor.

MASONRY

SUGGESTED CURRICULUM IN QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
MAS	1101	Bricklaying I	5	15	10
MAT	1101	Fundamentals of Mathematics	5	0	5
DFT	1110	Blueprint Reading: Building Trades	0	3	1
			10	18	16
SECOND QUARTER					
MAS	1102	Bricklaying II	5	15	10
MAT	1112	Building Trades Mathematics	3	0	3
DFT	1111	Blueprint Reading & Sketching I	0	3	1
			8	18	14
THIRD QUARTER					
MAS	1103	Bricklaying III	5	15	10
MAS	1113	Masonry Estimating I	3	3	4
DFT	1112	Blueprint Reading & Sketching II	0	3	1
			8	21	15
FOURTH QUARTER					
MAS	1104	Bricklaying IV	5	15	10
MAS	1114	Masonry Estimating II	3	3	4
DFT	1113	Blueprint Reading & Sketching III	0	3	1
			8	21	15
		Total Quarter Hours in Course			60

NURSES' ASSISTANT

This program is designed to prepare qualified personnel to give effective nursing care to selected patients, to make and report observations, and to carry out routine aspects of ward management. Classroom teaching is centered around modern concepts of health, functional relationships, and nursing procedures related to daily needs of patients, and to common therapeutic measures. Throughout the program emphasis is given to the role of the nurses's assistant.

Clinical experiences provide opportunities for applying classroom learnings to practice in the hospital setting.

The course is one quarter in length and graduates will receive certificates on satisfactory completion of the course.

QUARTERLY REQUIREMENTS

			Class	Lab	Credit
NUR	1101	Introduction to Nursing Assistant	4	6	6
NUR	1102	Anatomy & Physiology	4	6	6
NUR	1103	Nursing Assistant Arts	4	6	6
			12	18	18

NUR 1101 Introduction to Nursing Assistant

This course is an introduction to the role of the Nursing Assistant. The place and function of the Nursing Assistant within the over-all organization of health facilities will provide a major emphasis for the course.

NUR 1102 Anatomy and Physiology

A study of the structure and normal functions of the human body and its systems. Emphasis will be placed upon the interrelated functions of the various parts and systems of the body. Bones, organs, muscles, fluids and nerves will be considered.

NUR 1103 Nursing Arts

Designed to assist the beginning Nursing Assistant student in acquiring knowledge basic to the development of skills needed for safe and effective nursing care.

RADIO BROADCASTING

The purpose of this curriculum is to provide a general outline of a course of study to prepare men and women to enter the broadcast industry, properly trained, to assume normal duties in a broadcasting station. Students will be given training to enable them to qualify for the Federal Communications Commissions' third class operator's license.

The curriculum is designed to offer the student sufficient training so that he can perform efficiently as an announcer, salesman, or newsgatherer-writer.

Pending approval of N. C. State Board of Education

RADIO BROADCASTING

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
ENG	1101	Grammar	3	0	3
PSY	1206	Applied Psychology	3	0	3
BUS	1102	Typewriting	2	3	3
SPH	1100	Voice and Diction I	3	2	4
RTV	1101	Introduction to Broadcasting	5	0	5
			16	5	18
SECOND QUARTER					
ENG	1102	Composition	3	0	3
RTV	1103	Broadcast Announcing & Performance I	3	4	5
RTV	1110	Broadcast Operations—Traffic	3	4	5
RTV	1102	Newsgathering-Writing-Sports	3	4	5
RTV	1109	FCC Rules and Regulations	2	0	2
SPH	1101	Voice & Diction II	5	0	5
			19	12	25
THIRD QUARTER					
ENG	1204	Oral Communications	3	0	3
RTV	1104	Broadcast Announcing & Performance II	3	4	5
RTV	1115	Radio Production Techniques	3	2	4
RTV	1107	Broadcast Sales and Promotion	3	2	4
RTV	1114	Commercial Writing and Production	3	2	4
SPH	1102	Voice & Diction III	5	0	5
			20	10	25
FOURTH QUARTER					
ENG	1103	Report Writing	3	0	3
RTV	1105	Broadcast Announcing & Performance III	3	4	5
RTV	1106	Programming	3	2	4
RTV	1199	Broadcasting Practicum	0	12	4
			9	18	16
		Total Quarter Hours in Course			74

WELDING

Welders join metal by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding; arc, gas, and resistance welding are the three most important.

The principal duty of the welder using manual techniques is to control the melting by directing the heat from either an electric arc or gas welding torch, and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jogs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

CURRICULUM REQUIREMENTS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
WLD	1120	Oxyacetylene Welding and Cutting	3	12	7
MAT	1101	Fundamentals of Mathematics	5	0	5
DFT	1104	Blueprint Reading: Mechanical	0	3	1
PHY	1101	Applied Science	3	2	4
ENG	1101	Reading Improvement	2	0	2
			13	17	19
SECOND QUARTER					
WLD	1121	Arc Welding	3	12	7
MAT	1103	Geometry	3	0	3
DFT	1117	Blueprint Reading: Welding	0	3	1
PHY	1102	Applied Science	3	2	4
ENG	1102	Communication Skills	3	0	3
			12	17	18
THIRD QUARTER					
WLD	1124	Pipe Welding	3	12	7
WLD	1123	Inert Gas Welding	1	3	2
WLD	1112	Mechanical Testing and Inspection	1	3	2
DFT	1118	Pattern Development and Sketching	0	3	1
PSY	1101	Human Relations	3	0	3
			8	21	15
FOURTH QUARTER					
WLD	1122	Commercial and Industrial Practices	3	9	6
WLD	1125	Certification Practices	3	6	5
MEC	1112	Machine Shop Processes	0	6	3
BUS	1105	Industrial Organizations	3	0	3
			9	21	16
		Total Quarter Hours in Course			68

PRE-TECHNICAL PROGRAM
(Guided Studies)

The Pre-Technical Guided Studies Program is a three-quarter curriculum designed specifically for those students who show the need for further background or remedial work before they enter one of the regular two-year technical programs. Special courses have been designed to give each student the individual attention that he needs, especially in the areas of English and math.

	Credit Hours
FIRST QUARTER	
GS ENG 11—Reading Improvement	3
GS MATH 21—Fundamentals of Math	5
Elective in areas of interest	5
Elective in areas of interest	5
SECOND QUARTER	
GS ENG 12—Fundamentals of Grammar	3
GS MATH 22—Fundaments of Math	5
Elective in areas of interest	5
Elective in areas of interest	5
THIRD QUARTER	
GS ENG 13—Fundamentals of Writing	3
GS MATH 23—Fundamentals of Math	5
Elective in areas of interest	5
Elective in areas of interest	5

PRE-TECHNICAL COURSE DESCRIPTIONS
(Guided Studies)

MATHEMATICS

GS MATH 21 For: Business, Electronics, Drafting

Analysis of basic operations: Addition, subtraction, multiplication, and division. Fractions, decimals, and percentage. Practice in depth.

Prerequisite: None

GS MATH 22 For: Electronics, Drafting

Fundamental algebraic operations. Basic processes of signed numbers, algebraic symbols, linear equations with one or two unknowns, and factoring. Simultaneous and quadratic equations. Applications of these principles to practical problems.

Prerequisite: GS Math 21 or inventory analysis by instructor.

GS MATH 23 For: Electronics, Drafting

Continuation of GS Math 22. Powers of 10, exponents, and introduction to logarithms. Practice in depth.

Prerequisite: GS Math 22 or inventory analysis by instructor.

ENGLISH

GS ENG 11 Reading Improvement
A course designed to afford individual improvement in study skills and reading. Emphasis is placed on vocabulary building, methods of studying, reading comprehension, retention, and speed, accomplished through class instruction and participation.

GS ENG 12 Fundamentals of Grammar
A basic review of grammar, spelling, and their practical application to the business world. Emphasis is placed on capitalization, forming the plurals and possessives of nouns, verb forms and tenses, subject-verb agreement, and parts of speech.

GS ENG 13 Fundamentals of Writing
An intensive review of writing skills with emphasis on the sentence and the well-organized paragraph. Vocabulary study and review of grammar are continued.

VOCATIONAL COURSE DESCRIPTIONS

The contents of Vocational courses are outlined in the following course descriptions. Courses are numbered 1000 through 2000. Courses should be pursued in normal sequence with prerequisite courses taken as outlined.

One quarter hour of credit is earned for a class meeting one hour each week for the duration of the quarter with the exception of regular laboratories and "Manipulative laboratories." "Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour is given for each three of these laboratory hours; one quarter hour is given for each two regular laboratory hours.

Provided for each course is the following information: subject number, title, number of hours of credit and in parentheses, the number of lecture hours and the number of laboratory hours each week.

AIR CONDITIONING

AHR 1101 Automotive Air Conditioning **Credit 3(2-3)**
General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.

Prerequisite: PHY 1102

AUTOMOTIVE

AUT 1101 Shop Practices **Credit 1(0-3)**
Emphasis is on correct use of shop equipment and safety procedures to be followed in that usage. Cleaning agents and their correct usage will also be incorporated.

Prerequisite: None

AUT 1111 Auto Body Repair **Credit 7(3-12)**

Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contour of the present day vehicles. The student applies basic principles of straightening, aligning, and painting of damaged areas.

Prerequisite: None

AUT 1112 Auto Body Repair **Credit 7(3-12)**

A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting.

Prerequisites: AUT 1111, WLD 1101, PHY 1101, MAT 1101

AUT 1113 Metal Finishing and Painting **Credit 7(3-12)**

Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools.

Prerequisites: AUT 1112, WLD 1105

AUT 1114 Body Shop Applications **Credit 10(3-21)**

General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and development of the final settlement with the adjuster.

Prerequisites: AUT 1115, PHY 1102, DFT 1101

AUT 1115 Trim, Glass and Radiator Repair **Credit 5(2-9)**

Methods of removing and installing interior trim; cutting, sewing and installing headlinings, seat covers, and door trim panels; painting of trim parts and accessories. Glass removal, cutting, fitting, and installation. The student gains a thorough knowledge of the cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal engine cooling operation.

Prerequisites: AUT 1112, WLD 1105

AUT 1121 Brakes **Credit 8(6-6)**

A complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustments and repair.

Prerequisite: PHY 1102

AUT 1123 Chasis & Suspensions Systems **Credit 5(3-7)**

Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end and alignment.

Prerequisite: PME 1102

AUT 1124 Power Trains (Non-Automatic) **Credit 6(3-9)**

Principles and functions of automotive power train systems: Clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing and repair.

Prerequisite: PHY 1102, AUT 1123

AUT 1125 Auto Servicing **Credit 7(3-12)**

Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems providing a full range of experiences in testing, adjusting, repairing, and replacing.

Prerequisites: AUT 1123, AUT 1121, AHR 1101

BUSINESS

BUS 1103 Small Business Operations **Credit 3(3-0)**

An introduction to the business world, problems of small business operations, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

Prerequisite: None

BUS 1105 Industrial Organizations **Credit 3(3-0)**

Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost.

Prerequisite: None

BUS 1272 Principles of Supervision **Credit 3(3-0)**

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis is placed on securing an effective work force and the role of the supervisor. Methods of supervision are stressed.

CIVIL ENGINEERING

CIV 1101 Surveying **Credit 3(2-3)**

Basic instrumentation and topography will be studied together with field trips and drafting room application of site surveying.

CHEMISTRY

CHM 1111 Polution & Emmissions Control **Credit 5(4-3)**

An inductory chemistry course involving chemical terminology, atomic structure, properties of some elements, and the function of the periodic table. Properties of work consists of various inorganic reactions and the preparations.

COSMETOLOGY

COS 1101 Introduction To Cosmetology **Contact Hours 66(5-1)**

Designed to give the student a background for the profession and an understanding of the laws and civic responsibilities involved.

COS 1102 Bacteriology, Sanitation, and First Aid **Contact Hours 77(5-2)**

A study of bacteriology to prevent the spread of disease in the shops, and instructions in sanitary measures and laws. Emphasis is placed on safety and method of rendering first aid. Also instruction in health needs and habits of an individual.

COS 1103 Shampoo and Rinse **Contact Hours 33(1-2)**

This course covers the theory and practical training necessary to develop the manipulative skill for shampooing. Emphasis is placed on composition and application of various rinses.

COS 1105 Finger Waving and Pin Curling **Contact Hours 154(2-12)**

A study of hair, use of comb, fingers, and waving lotion to produce a wave. The different styles of finger waving, pin curling, and roller curl are studied to enable the student to make application of finger waving and pin curling to various styles.

COS 1106 Hair Shaping **Contact Hours 187(2-15)**

Skill in the use of scissors and razor for shaping the hair is developed in this course. The student becomes familiar with various methods of cutting hair which may be applied to specific hair styling and permanent waving.

COS 1107 Manicuring **Contact Hours 33(1-2)**

The care of the hands and nails with emphasis in correct procedures, techniques, materials, and equipment used in giving a manicure. Also attention devoted to developing an understanding of the relationship between customer and operator.

COS 1110 Permanent Waving—Cold and Heat Wave **Contact Hours 198(2-16)**

This course is designed to provide a foundation for the practical art of permanent waving. Such topics as types of permanent waver, texture and elasticity of hair, and shaping of hair are included. Also the methods of permanent waving are taught.

COS 1111 Hair Styling and Wig Care **Contact Hours 220(3-17)**

This course deals with the fundamental principles of hair styling and wig care. Through study of the contour of the head and face a student learns to see the relationship of these features to various hair styles. Also extensive practice in the proper use of sculpture curls, brushing and combing are included.

COS 1112 Personality **Contact Hours 22(2-0)**

Designed to develop a pleasing personality, charm, and poise necessary to every one in the beauty field.

COS 1115 Tinting and Bleaching **Contact Hours 66(1-5)**

A study of techniques and applications involved in giving hair tints and bleaches: action of chemicals to certain textures of hair; composition, merits, and limitations of softeners, developers, hair tints, and bleaches.

COS 1116 Scalp Treatments **Contact Hours 33(1-2**

A study of the principles, techniques, materials, supplies and applications use in giving scalp treatments.

COS 1118 Anatomy **Contact Hours 55(3-2**

The structure and function of the bones, muscles, and nerves with particula emphasis upon their application of cosmetology.

COS 1119 Anatomy **Contact Hours 66(2-4**

A continuation of Anatomy with additional emphasis on the structure and fun tion of bones, muscles, and nerves as applied to the work of the cosmetologist.

COS 1120 Facials **Contact Hours 66(1-5**

Designed to aid in the understanding of the principles, techniques, purpose application and benefits of facial massage and cosmetic use. The various typ of facials appropriate for different types of skin studied.

COS 1121 Disorders of Skin, Nails and Hair **Contact Hours 88(5-**

The cause, identification, and treatment of common skin disorders and scal diseases.

COS 1122 Electricity **Contact Hours 44(3-1**

Designed to acquaint the student to electricity in its different phases as applie to cosmetology. Such topics as wallplate, high frequency and electrodes a studied and discussed.

COS 1123 Chemistry **Contact Hours 33(2-1**

Designed to give the student an understanding of the basic principles of chen istry as they apply to the field of cosmetology. The major areas of work studie in this course: fundamentals of chemistry, chemistry of soaps, hair preparation nail preparations, deodorants, creams and lotions, and facial preparations.

COS 1124 Operational Management **Contact Hours 11(1-**

Designed to give the student an understanding of the principles relating to t operation of a beauty shop. Emphasis on equipment, finance and management.

DRAFTING

DFT 1101 Schematics and diagrams: Power Mechanics **Credit 1(0-**

Interpretation and reading of blueprints and development of ability to read a interpret blueprints, charts, instruction and service manuals, and wiring diagram Information on the basic principles of lines, views, dimensioning procedures, a notes.

Prerequisite: None

DFT 1102 Electrical Schematics **Credit 2(0-**

Interpretation and reading of schematic prints and diagrams. Making sketch of electrical wiring and components. Learning to identify the various co ponents of the systems by sketching and labeling parts. Practice in traci wiring systems and diagnosing trouble by using schematics and diagrams fou in service manuals.

DFT 1104 Blueprint Reading: Mechanical **Credit 1(0-3)**
Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines views, dimensioning procedures, and notes.

Prerequisite: None

DFT 1110 Blueprint Reading: Building trades **Credit 1(0-3)**
Principles of interpreting blueprints and trace specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.

Prerequisite: None

DFT 1111 Blueprint Reading and Sketching I **Credit 1(0-3)**
Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches, and cavity wall construction. Development of proficiency in making three view and pictorial sketches.

Prerequisite: DFT 1110.

DFT 1112 Blueprint Reading and Sketching II **Credit 1(0-3)**
Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings will be studied with emphasis on the plot plan, floor plan, basement and/or foundation plan, walls and various detailed drawings of masonry work.

Prerequisite: DFT 1111

DFT 1113 Blueprint Reading: Electrical **Credit 1(0-3)**
Interpretation of schematics, diagrams, and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buidings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course.

Prerequisite: DFT 1110

DFT 1117 Blueprint Reading:Welding **Credit 1(0-3)**
A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specification.

Prerequisite: DFT 1104

DFT 1118 Pattern Development and Sketching **Credit 1(0-3)**
Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates.

Prerequisites: None

DFT 1121 Drafting **Credit 7(3-12)**
An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial

drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time.

DFT 1122 Drafting **Credit 6(3-9)**

Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced and dimensioning and sectioning of oblique and axonometric pictorials will be done.

Prerequisite: DFT 1121

DFT 1141 Building Trades Drafting **Credit 7(3-12)**

An introduction to architectural drafting. Further development of techniques in lettering, dimensioning, freehand sketching and instrument drawing. Drawings of construction details, using appropriate material symbols and conventions. Working drawings, including plans, elevations, sections, scale details and full size details will be prepared from preliminary sketches.

Prerequisite: DFT 1122

DFT 1142 Building Trades Drafting **Credit 7(3-12)**

Individual and group participation in the preparation of complete working drawings for a complex architectural structure. Study of drafting room organization and relationships of personnel within the architectural office.

Prerequisite: DFT 1141, DFT 1143, DFT 1144

DFT 1143 Building Mechanical Equipment **Credit 4(3-3)**

General study of heating, air conditioning, plumbing and electrical equipment materials and symbols. Building code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings by mechanical engineers.

Prerequisite: DFT 1122

DFT 1144 Building Materials and Methods **Credit 4(3-3)**

Materials used in the construction of architectural structures will be studied. Their economic values and limitations affected by locality, budget and codes. Field trips to construction sites and study of manufacturer's specifications for materials. Standard sizes of structural materials and modular construction techniques.

Prerequisite: None

DFT 1145 Specifications and Contracts **Credit 4(3-4)**

The purpose and writing of specifications will be studied along with their legal and practical application to working drawings. Contract documents will be analyzed and studied for the purpose of client-architect-contractor responsibilities, duties and mutual protection.

Prerequisite: DFT 1141, DFT 1143, DFT 1144

ELECTRICAL

ELC 1102 Applied Electricity **Credit 6(4-7)**

The use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning and refrigeration installations. Electrical Principles and procedures for trouble-shooting of the various electrical devices used in air conditioning, heating, and refrigeration equipment. Included will be small transformers, various types of motors and starting devices, switches, electrical heating devices and wiring.

Prerequisite: PHY 1101

ELC 1112 Direct and Alternating Current **Credit 9(5-12)**

A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analysis of direct current circuits on Ohm's Law and Kirchoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits.

Prerequisite: None

ELC 1113 Alternating Current and Direct Current Machines and Controls **Credit 9(5-12)**

Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as: thermostats, times or sequencing switches.

Prerequisites: ELC 1112, MAT 1115

ELC 1114 DC/AC Fundamentals **Credit 6(4-7)**

A study of the basic laws pertaining to series and parallel circuits as well as reactance, impedance and polyphase systems; magnetics, basic electrical measuring instruments and sine wave analysis. Electron theory is the basis for this course.

Prerequisite: None

ELC 1115 DC/AC Fundamentals **Credit 3(1-8)**

A study of motors, generators, starters, controllers, push button stations. Provides fundamental concepts in single and poly phase AC circuits, voltages, currents, power measurements and transformers. Instruction in the use of electrical test instruments in circuit analysis. An introduction to the type controls used in environmental and boiler control.

Prerequisite: ELC 1114

ELC 1116 Electronic Devices **Credit 7(5-4)**

A study of the electrical characteristics of vacuum tubes and semi-conductors, with emphasis on their operation in conventional, as well as special type circuitry. Gas filled tubes and special types of semi-conductors and their applications will be investigated. Objectively, the course is designated to expose the student to the function of electronic devices as related to the operation and control of automated systems.

Prerequisite: ELC 1115

ELC 1124 Residential Wiring **Credit 8(5-9)**

Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, and the National Electrical Code regulations in actual building mock-ups.

Prerequisites: ELC 1113, & DFT 1110

ELC 1125 Commercial and Industrial Wiring **Credit 9(5-12)**

Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring and conduit preparation, and installation for simple systems.

Prerequisites: ELN 1118, ECL 1124

ELECTRONICS

ELN 1118 Industrial Electronics **Credit 5(3-6)**

Basic theory, operating characteristics, and application of vacuum tubes such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes, and other basic applications.

Prerequisite: ELC 1113

ELN 1119 Industrial Electronics **Credit 5(3-6)**

Basic industrial electronics systems such as: motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyratron tubes, and other basic types of systems commonly found in most industries.

Prerequisite: ELN 1118

ELN 1122 Vacuum Tubes and Circuits **Credit 8(5-9)**

An introduction to vacuum tubes and their development; the theory, characteristics and operation of vacuum diodes, semi-conductor diodes, rectifier circuits, filter circuits, triodes and simple voltage amplifier circuits.

Prerequisites: ELC 1112, MAT 1115

ELN 1123 Amplifier Systems **Credit 4(2-6)**

An introduction of commonly used servicing techniques as applied to monophonic and stereophonic high fidelity amplifier systems and auxiliary equipment. The operation and servicing of inter-communication amplifiers and switching circuits will also be taught.

Prerequisites: MAT 1115, ELC 1112

ELN 1125 Radio Receiver Servicing **Credit 4(2-6)**

Principles of radio reception and practices of servicing; included are block diagrams of radio receivers, servicing techniques of AM and FM receivers by resistance measurements, signal injection, voltage analysis, oscilloscope methods of locating faulty stages and components and the alignment of AM and FM receivers.

Prerequisites: ELN 1123, ELN 1122

ELN 1126 Transistor Theory and Circuits **Credit 9(4-5)**

Transistor theory, operation, characteristics, and their application to audio and radio frequency amplifier and oscillator circuits.

Prerequisite: ELN 1123

ELN 1127 Television Receiver Circuits and Servicing **Credit 15(10-15)**

A study of principles of television receivers, alignment of radio and intermediate frequency amplifiers, adjustment of horizontal and vertical sweep circuits will be taught. Techniques of troubleshooting and repair of TV receivers with the proper use of associated test equipment will be stressed. Additional study of more specialized servicing techniques and oscilloscope waveform analysis will be used in the adjustment, troubleshooting and repair of the color television circuits.

Prerequisites: ELN 1126, ELN 1125

ELN 1128 Television Receiver Circuits and Servicing **Credit 9(5-12)**

This course, taught in conjunction with an elective, will be a shortened version of ELN 1127.

Prerequisites: ELN 1126, ELN 1125

ENGLISH

ENG 1101 Reading Improvement **Credit 3(3-0)**

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train comprehension in larger units.

Prerequisite: None

ENG 1102 Communication Skills **Credit 3(3-0)**

Designed to promote effective communication through correct language usage in speaking and writing.

Prerequisite: ENG 1101

INSTRUMENTATION

ICM 1101 Fundamentals of Instrumentation **Credit 7(5-8)**

This course will provide the student with the basic fundamentals of controllers, control theory and control loops. Some of the major topics are: Basic controlled mechanisms, proportional controller, rate response, automatic reset response, pneumatic control mechanisms, transmitter theory, recorders-indicators charts, valve positioners, air supply systems, blueprint reading.

Prerequisite: MAT 1117

ICM 1102 Pneumatic Controls and Devices **Credit 4(1-4)**

Emphasis is placed on hardware. The student will learn the operation and adjustment of a wide variety of pneumatically operated controls and devices. Controllers, recorders, pressure regulators, actuators, transmitters are some of the devices the student will become familiar with. The student will also learn the application of each device.

Prerequisite: ICM 1101

ICM 1104 Calibration and Standardization **Credit 3(1-3)**

This course is designed to familiarize the student with the various types of instruments and control devices. The principles of measurement are covered, with emphasis on validity, sensitivity, units of measure and level of validity, sensitivity, units of measure and level of accuracy. The student will calibrate and adjust pneumatic mechanical and electro/electronic instruments and check their work under system operation.

Prerequisite: ICM 1102

ICM 1105 Sensing Devices **Credit 4(2-4)**

This course will cover devices designed to sense, and provide an output relative to: (1) Temperature, (2) Pressure, (3) Flow, and (4) Level. Some of the devices are as follows:

Temperature—(1) Thermocouple (2) Bi-metallic (3) Filled system.

Pressure—(1) Bellows (2) Bourdon Tube (3) Piezo Electric (4) Differential

Flow—(1) Orifice Plate (2) Rotometer (3) Magnetic Flow Meter (4) Positive Displacement Meter (5) Turbine Flow Meter (6) Petot Tube

Level—(1) Pressure Transmitter (2) Displacer (3) Bubble Tube (4) Ultra Sonic

Prerequisite: ELC 1114, ELC 1116

ICM 1106 Instrumentation Project **Credit 5(0-5)**

Laboratory projects in electronic and pneumatic instrumentation, to promote individual initiative and responsibility. Involves a review of major concepts in previous courses. The student will have maximum opportunity to develop, evaluate, and carryout his project.

Prerequisite: ICM 1101, ICM 1102

MACHINE SHOP

MEC 1112 Machine Shop Processes **Credit 2(0-6)**

To acquaint the student with the procedures of layout work and the correct use of hand and machine tools. Experiences in the basic fundamentals of drill press and lathe operation; hand grinding of drill bits and lathe tools; set-up work applied to the trade.

Prerequisite: None

MEC 1101 Shop Practices **Credit 3(0-9)**

The student will learn the care and use of a wide variety of hand and power tools, with emphasis on, "the right tool for the right job." He shall develop facility with the drill press, bench grinder, electric twist and impact drills, power vise, hand brake and conduit bender.

Prerequisite: None

MASONRY

MAS 1101 Bricklaying I **Credit 10(5-15)**

The history of the bricklaying industry. Clay and shell brick, mortar, laying foundations, laying bricks to a line, bonding, and tools and their uses. Laboratory work will provice training in the basic manipulative skills.

Prerequisite: None

MAS 1102 Bricklaying II **Credit 10(5-15)**

Designed to give the student practice in selecting the proper mortars, layout, and construrtion of various building elements such as foundations, walls, chimneys, arches and cavity walls. The proper use of bonds, expansion strips, wall ties and caulking methods are stressed.

Prerequisite: MAS 1101

MAS 1103 Bricklaying III **Credit 10 (5-15)**

Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels decorative stone, granite, marble, adhesive terra cotta and modular masonry construction theory and techniques.

Prerequisites: MAS 1102

MAS 1104 Bricklaying IV **Credit 10(5-15)**

A continuation of MAS 1103 emphasizing quality workmanship on a live project.

Prerequisite: MAS 1103

MAS 1113 Masonry Estimating I **Credit 4(3-3)**

This is a practical course in quantity "take off" from prints of the more common type jobs for bricklayers and masons. Figuring the quantities of materials needed and costs of building various components and structures.

Prerequisite: MAS 1103

MAS 1114 Masonry Estimating II **Credit 4(3-3)**

A continuation of MAS 1113 dealing with estimating cost of large commercial structures.

Prerequisite: MAS 1113

MATHEMATICS

MAT 1000 Technical Mathematics I **Credit 5(5-0)**

This course is designed to upgrade the student's basic mathematical skills. Some of the topics include; positive and negative numbers, fractions, algebraic expressions and operations, exponents, linear functions, equations with one (1) and two (2) variables, powers of ten.

MAT 1101 Fundamentals of Mathematics **Credit 5(5-0)**

Practical number theory. Analysis of basic operations: Addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportions. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduced to algebra used in trades. Practice in depth.

Prerequisite: None

MAT 1102 Algebra **5(5-0)**

Basic concepts and operations of algebra. Historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subtraction, substitution, graphing; exponents, logarithms, tables and interpolation.

Prerequisite: None

MAT 1103 Geometry **Credit 3(3-0)**

Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations.

Prerequisite: None

MAT 1112 Building Trade Mathematics **Credit 3(3-0)**

Practical problems dealing with volumes, weights, ratios: mensuration; and basic estimating practices for building materials.

Prerequisite: MAT 1101

MAT 1115 Electrical Mathematics **Credit 5(5-0)**

An introductory algebra course with trigonometry and vectors needed in alternating current: algebraic operations of addition, subtraction, multiplication and division; use of letters and signs, grouping, factoring; exponents, ratios and proportions; algebraic and graphic solutions of first-degree equations; introduction to trigonometric functions, their graphs and applications to right triangles. Addition, subtraction, and resolution of vector quantities.

Prerequisite: None

MAT 1116 Electrical Mathematics **Credit 5(5-0)**

A working knowledge of the powers of 10, OHM's Law for series and parallel circuits, quadratic equations, Kirchoff's Laws, trigonometric functions, plane-vectors, alternating currents, vector algebra and logarithms.

Prerequisite: MAT 1115

MAT 1117 Mathematics for Instrumentation **Credit 5(5-0)**

This is primarily a course in algebra. The student will be drilled extensively in algebraic operations of addition, subtraction, multiplication and division, as well as the solution of expressions containing two or more variables. Solution of simultaneous equations will be taught by the use of determinants. The rectangular coordinate system, trigonometry, vector addition and subtraction, and logarithms will also be introduced.

Prerequisite: MAT 1000 or equivalent

PHYSICS

PHY 1000 Introductory Physics

This course is designed to introduce the student to basic physics. Units of measurement and application, force and motion, basic machines, friction, rotation, torque and power transmission are among the topics covered by this course. A practical approach is used in teaching the use of essential mathematical formulas.

PHY 1101 Applied Science **Credit 4(3-2)**

An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles.

Prerequisite: None

PHY 1102 Applied Science **Credit 4(3-2)**

The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power.

Prerequisite: PHY 1101

PHY 1103 Physics for Instrumentation

This course covers work and energy developed from the basic machines. Forces, components, rectilinear motion in a horizontal plane, temperature measurement and conversion, and heat energy will be included. The action of bi-metallic elements to temperature changes, as well as applications of disimilar metals.

Prerequisite: None

POWER MECHANICS

PME 1101 Internal Combustion Engine **Credit 7(3-12)**

Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.

Prerequisite: None

PME 1102 Engine Electrical and Fuel Systems **Credit 9(5-12)**

A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system.

Prerequisite: PME 1101

PSYCHOLOGY

PSY 1101 Human Relations **Credit 3(3-0)**

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation. This course is student-activity centered, rather than lecture.

Prerequisite: None

studio equipment and broadcast procedures.

RTV 101 Introduction to Broadcasting **Credit 5(5-0)**

An overview of the entire field of radio broadcasting, including the history of the origin and development of the broadcasting industry in the U. S., the various dimensions of broadcasting, station organization procedures, and factors influencing broadcasting from social, political, and economic areas. Also technical advances and interrelationships between the media.

Prerequisite: None

RTV 102 Newsgathering-Writing-Sports **Credit 5(3-4)**

An introduction to the field of broadcast journalism with special emphasis placed upon gathering, writing, editing and procession of news and specialty programs, including the documentary.

Prerequisite: None

An introduction to the problems the radio and television announcer-performer faces in the two media, with emphasis in the analysis, interpretation, and communications of a variety of types of announcing-performance projects. The course is further designed to give the student background and experience in relating his speech, personality, character, and temperament to broadcast speech communication and to familiarize the student with basic radio and television

RTV 103 Broadcast Announcing and Performance I **Credit 5(3-4)**

Prerequisites: ENG 101 and RTV 101

RTV 104 Broadcast Announcing and Performance II **Credit 5(3-4)**

A continuation of RTV 103. Advanced study of the announcer's techniques, with practice in sight reading of all types of continuity.

Prerequisite: RTV 103

RTV 105 Broadcast Announcing and Performance III **Credit 5(3-4)**

A continuation of the study of basic broadcasting procedures.

Prerequisite: RTV 103

RTV 106 Programming **Credit 4(3-2)**

A study of the program schedule and station image, audience determination, sources and effects of public service programs, and NAB programming codes.

Prerequisite: None

RTV 107 Broadcast Sales and Promotion **Credit (4(3-2)**

An examination of rate cards and other sales tools, preparing and delivering sales presentation, obtaining and retaining accounts, and a look at agencies, administration, and compensation.

Prerequisite: None

RTV 109 FCC Rules and Regulations **Credit 2(2-0)**

To prepare technicians for the third class radio-telephone operator's license examination as administered by the General Communications Commission.

Prerequisite: None

RTV 110 Broadcast Operations—Traffic Credit 5(3-4)

The study of fundamental processes and procedures utilized in broadcast control and studio areas, including logging, announcing, and format. The operation of audio equipment including recorders and players.

Prerequisite: RTV 101 and FCC rd. Class Radio-Telephone license

RTV 114 Commercial Writing and Promotion Credit 4(3-2)

Learning how to combine showmanship with salesmanship; the use of dialogue, sound effects and music, special acoustical effects, drama, comedy, jingles, and verse for appealing commercials.

Prerequisite: None

RTV 115 Radio Production Techniques Credit 4(3-2)

Creating a show! The study of format, talent sources, personnel, and techniques, of themes and intros, commercial integration, program balance, timing, cues and hand signals.

Prerequisite: RTV 110

RTV 199 Broadcasting Practicum Credit 4(0-12)

The student will work in an actual broadcasting station under the supervision of station management and CCTI instructors. This will enable him to observe and take part in the actual functioning of a station.

Prerequisites: RTV 101; 102; 104; 103; 107; 110; 114; 115

SPEECH

SPH 100 Voice and Diction Credit 3(3-2)

The study of effective voice production and articulation, acceptable pronunciation, intonation, rhythm, and phrasing; a consideration of elementary vocal anatomy and the fundamentals of the science of sound. Specific speech problems will be handled on an individual basis.

Prerequisite: None

SPH 101 Speech Credit 5(5-0)

The areas of study involved are the different types of speeches, vocabulary improvement and acceptable pronunciation when reading the news, weather, sports.

SPH 102 Advanced Reading and Speaking Credit 5(5-0)

Emphasis will be placed on improving reading comprehension. Further work on vocabulary improvement, correct pronunciation and impromptu speaking will be included.

Prerequisite: None

WELDING

WLD 1101 Basic Gas Welding Credit 1(0-3)

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver-soldering, and flame-cutting methods applicable to mechanical repair work.

Prerequisite: None

WLD 1105 Auto Body Welding **Credit 1(0-3)**

Welding practices on material applicable to the installation of body panels and repairs to door, fenders, hoods, and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course.

Prerequisite: WLD 1101

WLD 1112 Mechanical Testing and Inspection **Credit 2(1-3)**

The standard method for mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guide-bend, nick-tear, notched-bend, tee-bend, non-destructive, V-notch, Charpy impact, etc.

Prerequisites: WLD 1120, WLD 1121

WLD 1120 Oxyacetylene Welding and Cutting **Credit 7(3-12)**

Introduction to the history of oxyacetylene welding, the principles of welding and cutting nomenclature of the equipment, assembly of units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

Prerequisite: None

WLD 1121 Arc Welding **Credit 7(3-12)**

The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course in the use of tools and equipment.

Prerequisite: None

WLD 1122 Commercial and Industrial Practices **Credit 6(3-9)**

Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspection.

Prerequisites: WLD 1120, WLD 1121

WLD 1123 Inert Gas Welding **Credit 2(1-3)**

Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding.

Pererquisites: WLD 1120, WLD 1121

WLD 1124 Pipe Welding **Credit 7(3-12)**

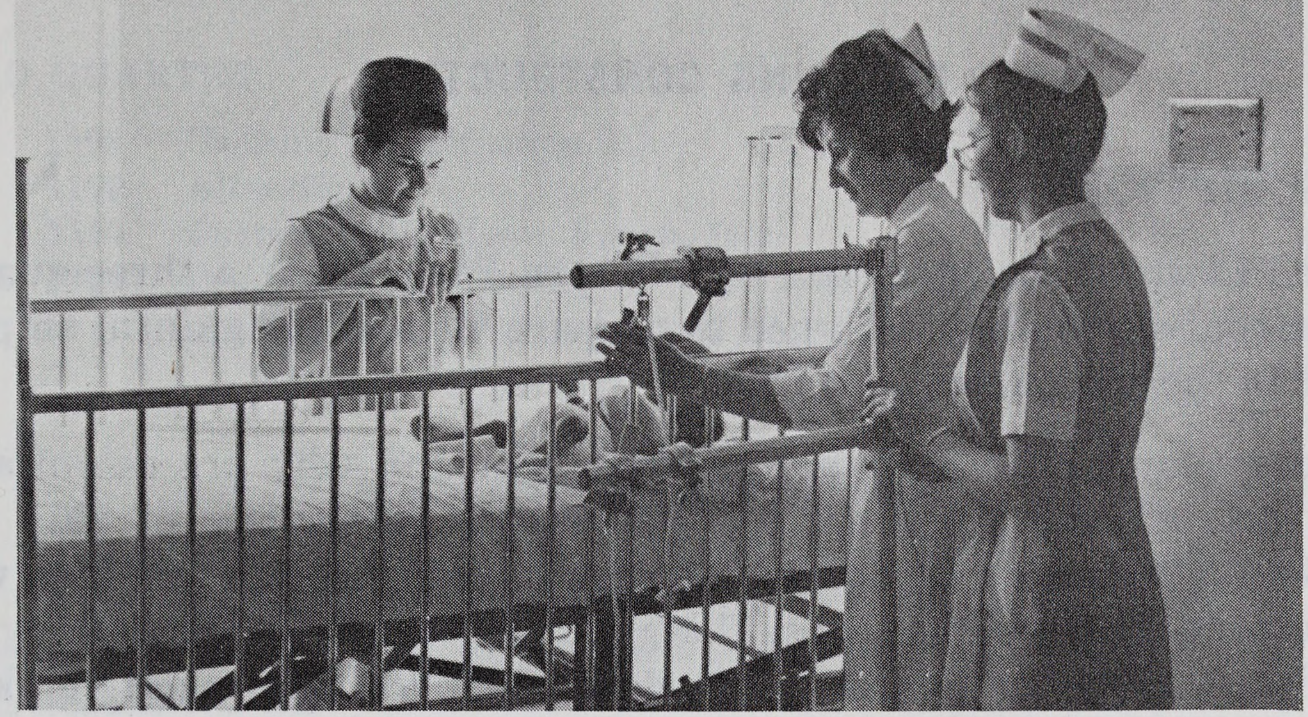
Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.

Prerequisite: WLD 1121

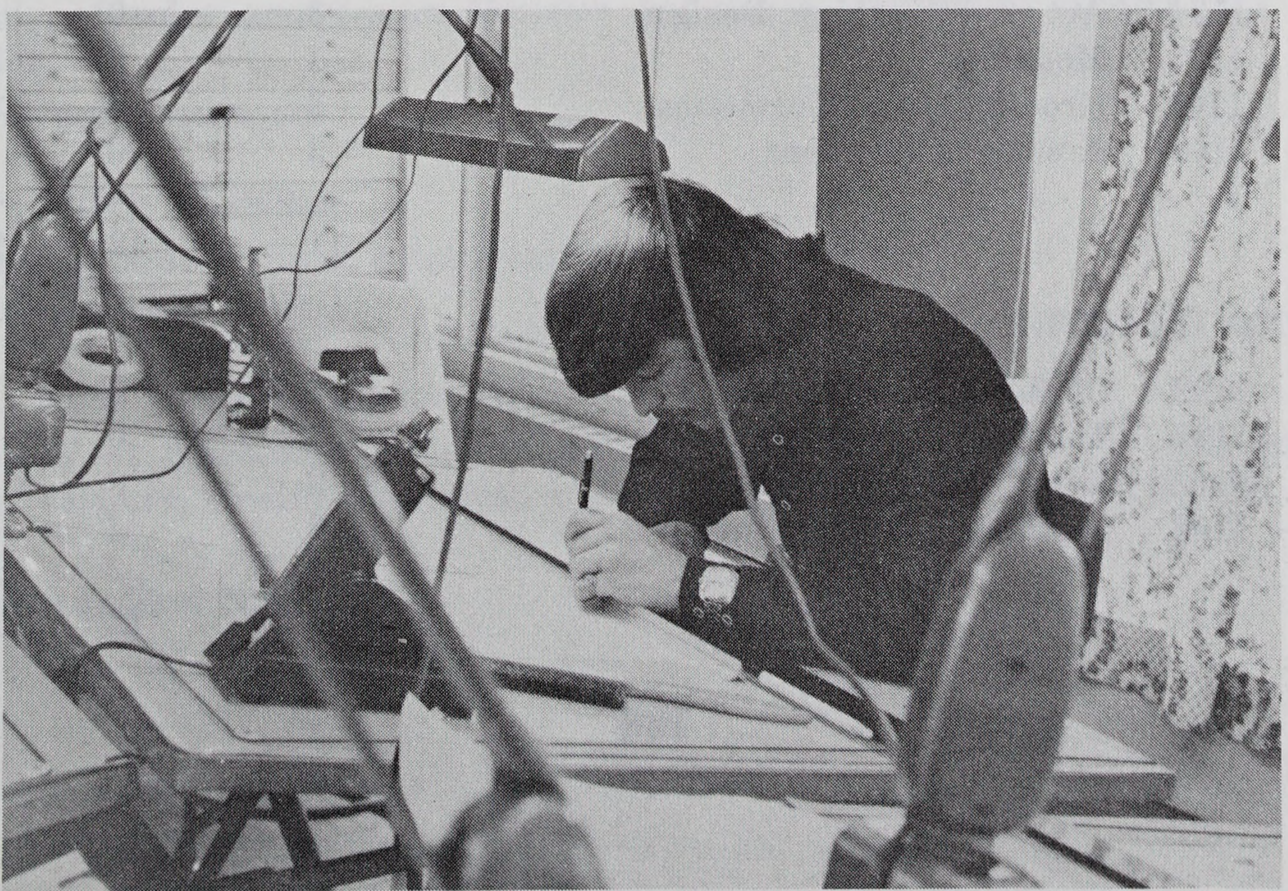
WLD 1125 Certification Practices **Credit 5(3-6)**

This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds.

Prerequisites: WLD 1120, WLD 1121, WLD 1123, WLD 1124



Certificate Programs



CLOTHING CONSTRUCTION

DESCRIPTION

The Clothing Construction and Design Program is a three-quarter vocational curriculum designed to prepare women for gainful employment in the clothing service field.

Accepting the precept that learning how and why are essential in any instructional program, the underlying philosophy of this curriculum is "learning by doing." General courses provide students with the essential knowledge of clothing service while the laboratory activities provide opportunities for developing the manipulative skills. Practical work experience is provided so that students are able to combine knowledge and skills in an on-the-job work experience to gain the confidence and proficiency necessary to function successfully when gainfully employed.

Recognizing that many women are still concentrated in low-skilled, low paid jobs, this curriculum is designed to provide opportunities for women of various ages and backgrounds to prepare for a career in the clothing service occupations. The high school graduate as well as the dropout who left school because of an early marriage, economic problems, or other reasons could benefit from an educational program of this type.

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
HEC	1101	Clothing Construction I	2	8	6
HEC	1104	Art and Clothing Design	3	0	3
HEC	1105	Modeling	1	2	2
HEA	1101	Grooming and Cosmetics	2	2	3
HEC	1106	Sewing Equipment	3	0	3
			11	12	17
SECOND QUARTER					
HEC	1102	Clothing Construction II	2	8	6
HEC	1107	Textiles (Consumer)	3	0	3
HEC	1112	Retailing of Clothing	3	0	3
HEC	1108	Clothing for the Family	2	4	4
			10	12	16

THIRD QUARTER

HEC	1103	Clothing Construction III	2	8	6
HEC	1109	Alterations	1	4	3
HEC	1110	Custom Made Home Furnishings	1	4	3
HEC	1111	Internship in Clothing Construction	0	15	3
			—	—	—
			4	31	15

CLOTHING CONSTRUCTION

HEA 1101 Grooming and Cosmetics 2 2 3

The care and use of make-up, wigs, and dress for business.

Prerequisite: None

HEC 1101 Clothing Construction I 2 8 6

A study and practice of the parts of machine-use and care, body measurement, pattern selection to suit figure, pattern marking, reading and understanding guide, and construction of simple garment.

Prerequisite: None

HEC 1102 Clothing Construction II 2 8 6

A study and practice of construction of garments, use of buttonhole worker and zig zag machines, pattern adjustments to suit figure faults, machine adjustments —materials, threads, tensions, accessories, scarfs, belts, collars, cuffs, decorative trims.

Prerequisite: Clothing Construction I

HEC 1103 Clothing Construction III 2 8 6

A study and practice in creative design, construction of coats, suits, etc., lining of garments, using fake fur, leather, velvet, and techniques for different kinds of knits.

Prerequisite: Clothing Construction II

HEC 1104 Art and Clothing Design 3 0 3

A study of color and design theories and their relation to fabrics and their selection.

Prerequisite: None

HEC 1105 Modeling 1 2 2

A course in figure control, stance, carriage, and posture.

Prerequisite: None

HEC 1106 Sewing Equipment 3 0 3

The study of machines and equipment for home and commercial use. Cutting boards, scissors, sewing machines, pressing equipment, tailor's chalk, and their care.

Prerequisite: None

HEC 1107 Textiles (Consumer) 3 0 3

The study of identification, manufacturing, properties of fabrics in relation to their care and serviceability.

Prerequisite: None

HEC 1108 Clothing for the Family 2 4 4

Study of clothing selection and construction for children and adult, both men and women.

Prerequisite: None

HEC 1109 Alterations 1 4 3

Men's and women's clothes, replace zippers, cuffs, coat suit and skirt hems, waistline adjustments, pockets, and sleeves, (coats and skirts).

Prerequisite: None

HEC 1110 Custom Made Home Furnishings 1 4 3

The construction of slip covers, dust ruffles, draperies, bed spreads, pillows, curtains, and lamp shades.

Prerequisite: None

HEC 1111 Internship in Clothing Construction 0 15 3

This course consists of one quarter of supervised cooperative work experience of approximately eleven weeks at fifteen hours each week, or approximately 165 total hours awarding three quarter hours credit. The objective of this course is to provide the student—before graduation from Clothing Construction and Design—a working practice in an environment in which he will experience after graduation and upon employment. This period of time will enable the student to use the equipment and perform the processes and services required of his specialty under close supervision and with responsibilities commensurate with his capabilities. The cooperative work experience period will be carefully planned and closely supervised by both the educational institution where the student is enrolled and the agency or business where the student is employed. An official agreement among the educational institution, the student, and the agency or business will provide for a programmed sequence of activities to be performed by the student with supervisory responsibilities for the educational elements of the work clearly defined.

Prerequisite: Consent.

HEC 1112 Retailing of Clothing 3 0 3

A course in basic sales techniques relative tothe clothing industry.

Prerequisite: None

PROFESSIONAL HOUSEKEEPING AND CHILD CARE

The Professional Housekeeping and Child Care curriculum is a three quarter vocational program designed to prepare women for gainful employment as a Household Aide, Household Assistant, or Household Maanger.

This curriculum is developed with the career ladder concept in mind. Students entering this program have the opportunity to enter and exit at three intervals depending upon their interest and need. The first quarter provides instruction in basic housekeeping procedure and prepares students for gainful employment as a household aide. The second quarter provides instruction in food preparation, food service, and communication with young children. Students completing the first two quarters are prepared for employment as a household assistant. The third quarter includes management skills and training in home child care. Students completing this three quarter program have had instruction and on-the-job work experience in the three basic areas of professional housekeeping and child care.

Supervised work experience is an essential part of the entire Professional Housekeeping and Child Care curriculum. Learning by doing is the underlying philosophy of the curriculum. Students enrolled in the Professional Housekeeping and Child Care program receive basic instruction in the classroom and develop manipulative skills through laboratory experiences. The on-the-job training phase provides an opportunity for students to use knowledge and apply skills and techniques to an actual on-the-job situation. The coordinating instructor works with the training station and the student in planning desirable work experiences. This articulation between the school and the employment agency provides an easier transition for students leaving schools and entering employment.

Graduates of the Professional Housekeeping and Child Care program are qualified for employment as a: *homemaker*; running the household when the mother or housewife is not in the home, is in capacitated, or a new mother, *housekeeper*; to take complete charge of running a home. Duties are to clean, cook, bake, shop, child care, laundry, mend, serve and other general household duties, *maid*; to do the general duties of keeping a home clean and in order and when necessary care for the children, *child care worker*; to care for and be responsibile for the welfare of children in the absence of parents, *day worker*; to do heavy and thorough cleaning of home, garage, porch, and immediate area around the home.

Training of this type does not prepare a student only for domestic service but also provides employment opportunities in institutional housekeeping and management.

PROFESSIONAL HOUSEKEEPING AND CHILD CARE

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
MAT		Household Aide	3	3	5
ENG	1101	Fundamentals of Math	5	0	5
	1101	Reading Improvement	3	0	3
		Co-op Work Experience	0	28	3
			—	—	—
			11	31	16
SECOND QUARTER					
PSY		Household Assistant	2	4	5
EDU	1101	Human Relations	3	0	3
	1006	Communicating Effectively with the Young Child	3	0	3
		Co-op Work Experience	0	28	3
			—	—	—
			8	32	14
THIRD QUARTER					
		Household Manager	2	4	5
		Child Care and Training in the Home	3	3	5
		Co-op Work Experience	0	25	3
			—	—	—
			5	32	13

PROFESSIONAL HOUSEKEEPING AND CHILD CARE

COURSE DESCRIPTIONS BY QUARTERS

	Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER			
Household Aide	3	3	5

Provides instruction concerning the home. The student is taught general cleaning methods, procedures, and uses of supplies and equipment for all living areas in the home. Sanitation, safety, personal grooming, job orientation and the legal aspects of employment are also a part of the course.

	Class	Lab	Credit
MAT 1101 Fundamentals of Math	5	0	5

Practical number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

ENG 1101 Reading Improvement 3 0 3

Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and world group recognition, and train for comprehension in larger units.

Co-op Work Experience 0 28 3

Description on back page.

SECOND QUARTER

Household Assistant 2 4 5

This course provides instruction in the three areas of meal preparation which include preparing family meals, party and special meals. Planning efficient use of time and motion in planning the daily work schedule. Providing child care services. Learning to care for the infant and the preschool child.

PSY 1101 Human Relations 3 0 3

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationship within the work situation.

EDU 1006 Communicating Effectively with the Young Child 3 0 3

Study of language development in relation to adult models and the child's early experiences. Remedial approaches to improving the student's oral communication, in order to serve as an effective model. Case studies provides opportunities to analyze problems of adult-child communication and to derive guidelines for establishing effective communication patterns with young children.

Co-op Work Experience 0 28 3

THIRD QUARTER

Household Manager 2 4 5

This course provides instruction in the areas of operating and managing a household. Topics included are planning, purchasing and storage of foods for family meals, care of clothing and household textiles, family needs in relation to age, etc.

Child Care and Training in the Home 3 3 5

Co-op Work Experience 0 25 3

This is a course on the understanding of young children and why they do things. Topics included in the course are; rest and play activities for young children, entertaining and training young children, developing good eating habits, safety and health precautions, obligations and responsibilities—where to reach parents or guardians, etc.

Co-op Work Experience 0 28 3

This course consists of one quarter of supervised cooperative work experience of approximately 11 weeks at 28 hours per week, or approximately 300 total hours awarding three quarter hours credit. The objective of this course is to provide the student before graduation from Professional Housekeeping and Child

Care a working practice in an environment in which he will experience after graduation and upon employment. This period of time will enable the student to use the equipment and perform the processes and services required of his specialty under the close supervision and with responsibilities commensurate with his capabilities. The cooperative work experience period will be carefully planned and closely supervised by both the educational institution where the student is enrolled and the agency or business where the student is employed. An official agreement among the educational institution, the student, and the training agency will provide for a programmed sequence of activities to be performed by the student with supervisory responsibilities for the educational elements of the work clearly defined.

TAILORING

This is a general course in tailoring. It covers all phases of manufacturing methods including the making of men, ladies, and children's clothing such as coats, trousers, vests, overcoats, and dresses.

Work to be covered includes body measurements to determine pattern size, explanation of tools, the pattern envelope and instructions, pattern fitting, straightening fabric, pattern layout, use of sewing machine and types of stitches.

Help is also offered on problems encountered after construction is begun, for instance, hand stitches, darts, neck finishes, pockets, plackets and zippers, seams and seam finishes, sleeves, curves, linings, buttonholes and coverning belts and buckles. The course also includes repairing, altering and pressing so the student will be familar with commercial work.

TAILORING

SUGGESTED CURRICULUM BY QUARTERS

Course Title			Hours Per Week Class	Lab	Quarter Hours Credit
FIRST QUARTER					
TLR	1101	Tailoring I	3	12	7
TLR	1102	Pressing	2	3	3
TLR	1103	Pattern Drafting I	3	3	4
			8	18	14
SECOND QUARTER					
TLR	1104	Tailoring II	3	12	7
TLR	1105	Power Sewing	2	3	3
TLR	1106	Fabric I	3	3	4
			8	18	14

THIRD QUARTER

TLR	1107	Tailoring III	3	12	7
TLR	1108	Fabric II	3	3	4
TLR	1109	Pattern Drafting II	3	3	4
			—	—	—
			9	18	15

FOURTH QUARTER

TLR	1110	Tailoring IV	3	15	8
BUS	1103	Small Business Operations	3	0	3
PSY	1101	Human Relations	3	0	3
			—	—	—
			9	12	14

TAILORING

COURSE DESCRIPTIONS BY QUARTERS

	Hours Per Week Class	Hours Per Week Lab	Quarter Hours Credit

FIRST QUARTER

TLR 1101 Tailoring I 3 12 7

This basic course covers the care and use of the sewing machine and proper techniques of using the basic hand tools of the trade. The basic construction of pockets and selection of fabrics are emphasized.

TLR 1102 Pressing 2 3 3

A study of the shrinking properties of fabrics by steaming and the proper pressing of trousers by seam lines are the main units stressed in this basic course.

TLR 1103 Pattern Drafting I 3 3 4

The student is taught to measure and draft a trouser pattern using the trouser formula. Drafting tools such as the square, rule and curve are used along with a study of basic math required by the trouser formula.

SECOND QUARTER

TLR 1104 Tailoring II 3 12 7

A continuation of the techniques of trouser construction with an emphasis on marking by pattern, layout, cutting and panel construction.

TLR 1105 Power Sewing 2 3 3

This course stresses the operation of the basic power machines such as the blind stitcher, merrow serging machine and the 31-15 machine. The student is taught the basics of sewing garments such as t-shirts, shells, etc.

TLR 1106 Fabric I 3 3 4

A study of the various types of fabrics, weaves, and knits with an evaluation of natural and synthetic fibers. Various blends and finishes are covered with a study of their thermal properties.

THIRD QUARTER

TLR 1107 Tailoring III 3 12 7

The student is taught how to lay out patterns for a coat and vest, techniques of marking and efficiency in cutting, a continuation of skill work on the sewing machine as the student continues to make more advanced garments on an individual rate basis.

TLR 1108 Fabric II 3 3 4

A study of the various criteria used in the selection of a fabric for a particular application. Various laboratory tests of fabrics are covered, such as the Mullen burst test, the abrasion test and tear tests. How to identify a fabric is stressed.

TLR 1109 Pattern Drafting II 3 3 4

A continuation of the skills learned in Drafting I with emphasis placed on drafting a coat and vest pattern.

FOURTH QUARTER

TLR 1110 Tailoring IV 3 15 8

This course emphasizes the construction of various types of coats and vests. The student progresses at his own rate, gaining experience in all the operations and construction techniques in producing garments of various styles.

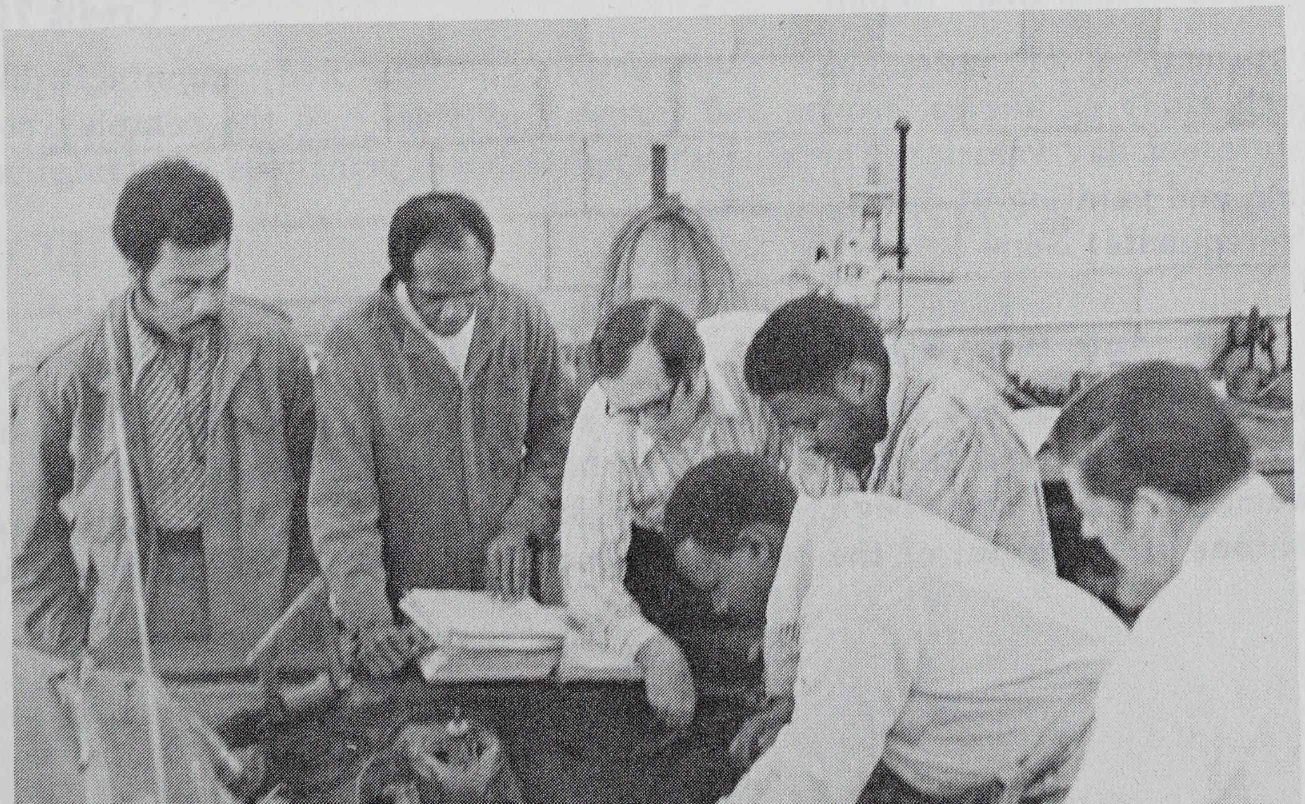
BUS 1103 Small Business Operations 3 0 3

An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

PSY 1101 Human Relations 3 0 3

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

Evening Certificate Programs



AUTO BODY REPAIR

Course Title	Nights Per Week	Contact Hours
FIRST QUARTER		
AUT 1111 Auto Body Repair	2	66
SECOND QUARTER		
WLD 1105 Welding	2	66
THIRD QUARTER		
AUT 1112 Auto Body Repair	2	66
FOURTH QUARTER		
AUT 1113 Metal Finishing and Painting	2	66
FIFTH QUARTER		
AUT 1115 Trim, Glass and Radiator Repair	2	66
SIXTH QUARTER		
AUT 1114 Body Shop Applications	2	66
TOTALS required for Completion		396

COURSE DESCRIPTIONS

WLD 1105 Auto Body Welding

Welding practices on materials applicable to the installation of body panels and repairs to door, fenders, hoods, and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course.

AUT 1111 Auto Body Repair **Credit 7(3-12)**

Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contour of the present day vehicles. The student applies basic principles of straightening, aligning, and painting of damaged areas.

Prerequisite: None

AUT 1112 Auto Body Repair **Credit 7(3-12)**

A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting.

AUT 1113 Metal Finishing and Painting **Credit 7(3-12)**

Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools.

AUT 1114 Body Shop Applications **Credit 10(3-21)**

General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and development of the final settlement with the adjuster.

AUT 1115 Trim, Glass and Radiator Repair **Credit 5(2-9)**

Methods of removing and installing interior trim; cutting, sewing and installing headlinings, seat covers, and door trim panels; painting of trim parts and accessories. Glass removal, cutting, fitting, and installation. The student gains a thorough knowledge of the cooling system and repairs and replaces damaged cooling system components. Tests are made to insure normal engine cooling operation.

AUTOMOTIVE MECHANIC CERTIFICATES—EVENING PROGRAM

Course Title			Nights Per Week	Contact Hours
FIRST QUARTER				
PME	31101	Internal Combustion Engine	2	66
SECOND QUARTER				
PME	31102	Engine Electrical & Fuel System	2	66
THIRD QUARTER				
PME	31123	Brakes, Chassis & Suspension	2	66
FOURTH QUARTER				
PME	31103	Principles of Auto Air Condition	2	66
FIFTH QUARTER				
PME	31124	Power Trains	2	66
SIXTH QUARTER				
PME	31221	Front Suspension and Power Steering	2	66
Totals Required for Completion				396

AUTOMOTIVE MECHANIC CERTIFICATE—EVENING PROGRAM

	Nights Per Week	Contact Hours
FIRST QUARTER		
PME 31101 Internal Combustion Engine	2	66

Development of a thorough knowledge and ability in using, maintaining and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing, and repairing.

SECOND QUARTER

PME 31102 Engine Electrical & Fuel System 2 66

A thorough study of the electrical and fuel systems of the automobile, battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system.

THIRD QUARTER

PME 31123 Brakes, Chassis & Suspension 2 66

Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, steering and braking systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, front end, types and servicing of brakes.

FOURTH QUARTER

PME 31103 Principles of Auto Air Condition 2 66

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.

FIFTH QUARTER

PME 31124 Power Trains 2 66

Principles and functions of automotive power train systems; clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair.

SIXTH QUARTER

PME 31221 Front Suspension & Power Steering 2 66

A study of the various types of automotive frames (car and truck), theory of weight distribution, and front suspension parts mounting. Theory of operation, correct disassembly and assembly of all front suspension parts. Designed to give a thorough understanding of steering gears (power and standard), shock absorbers, springs, wheels, tires, power steering, pumps, etc. Theory of steering geometry as related to the construction of various automotive front ends. Theory of balancing and the correct use of various types of balancing machines. A study of and practice in the use of alignment specification charts and machines. Analysis and correction of the wearing problems, vibration, hard steering, pulling, ducking, etc. Shop practice in diagnosis and correction of problems.

EVENING CERTIFICATE PROGRAMS

The following programs are conducted at night for adults who wish to earn evening certificates. The programs are designed to be completed within four to eight quarters. Certificates will be issued only upon completion of the courses required in a particular program. Students may enter a program at the beginning of any quarter. The certificate programs do not prohibit any student from taking individual courses for personal improvement. Each certificate program and individual course is open to those persons who feel that they can do the work required and who have a need for such training.

Courses within each program may be transferred for credit to the day certificate, diploma or degree programs if the students have met the admission requirements stated in the general catalogue. For further information concerning the transfer of credit, students should contact the Director of Student Personnel. Each course to be transferred for curriculum credit is subject to evaluation by the chairman of a particular department.

BUILDING TRADES DRAFTING CERTIFICATE—EVENING PROGRAM

Course Title	Nights Per Week	Contact Hours
FIRST QUARTER		
ARC 3106 Architectural Drafting I	2	66
SECOND QUARTER		
ARC 3107 Architectural Drafting II	2	66
THIRD QUARTER		
ARC 3108 Architectural Drafting III	2	66
FOURTH QUARTER		
ARC 3220 Architectural Drafting IV	2	66
FIFTH QUARTER		
ARC 3221 Architectural Drafting V	2	66
SIXTH QUARTER		
ARC 3222 Architectural Drafting VI	2	66
Totals Required for Completion		396

Building Trades Drafting Certificate—Evening Program

Course	Title	Nights Per Week	Contact Hours

FIRST QUARTER

ARC 3106	Architectural Drafting I	2	66

A course designed to provide fundamental knowledge of the principles of drafting. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views. Projection problems dealing with principles of descriptive geometry, involving points, lines, planes, and connectors. The principles of isometric, oblique, and perspective drawings are introduced. Materials used in the construction of architectural structures will be studied. Manufacturer's specifications for materials, properties and standard sizes of structural materials, and construction techniques are included.

SECOND QUARTER

ARCH 3107	Architectural Drafting II	2	66

Development of techniques of architectural lettering, symbols, and their interpretations; dimensioning, freehand and instrument drafting. Drawing of construction details, sections, scale details and full-size details will be prepared from preliminary sketches.

THIRD QUARTER

ARC 3108	Architectural Drafting III	2	66

An approach in depth to the study of architectural drafting. Drawing of construction of details, using appropriate material symbols and conventions. A complete set of working drawings, including plans, elevations, sections, scale details and full-size details will be prepared from preliminary sketches. This course is a continuation of DFT 1132.

FOURTH QUARTER

ARC 3220	Architectural Drafting IV	2	66

Drawing of plans and details as prepared for building construction including steel, concrete, and timber structural components. Reference materials will be used to provide the draftsman with skills and knowledge in locating data and in using handbooks. This course will deal mainly with commercial construction.

FIFTH QUARTER

ARC 3221	Architectural Drafting V	2	66

Advanced study for architectural drawing of commercial building. Consideration is given to coordination of mechanical and electrical features with structural and architectural components.

Mechanical Drafting Certificates—Evening Program

Course Title			Nights Per Week	Contact Hours
FIRST QUARTER				
DFT	31121	Drafting I	2	66
MAT	31101	Fundamentals of Mathematics	1	33
SECOND QUARTER				
DFT	31122	Drafting II	2	66
MAT	31124	Applied Mathematics	1	33
THIRD QUARTER				
DFT	31131	Mechanical Drafting III	2	66
FOURTH QUARTER				
DFT	31132	Mechanical Drafting IV	2	66

Totals		
4 Quarters	Mechanical Drafting	264
2 Quarters	Mathematics	66
	Required for Completion	330

	Nights Per Week	Contact Hours
FIRST QUARTER		
DFT 31121 Drafting I	2	66

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, singlestroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practice will be studied with reference to the American Standards Association practices. Methods of reproducing drawing will be included at the approximate time.

MAT 31101 Fundamentals of Mathematics	1	33

Practice number theory. Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surface and volumes. Introduction to algebra used in trades. Practices in depth.

SECOND QUARTER

DFT 31122 Drafting II 2 66

The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions will be studied, and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet metal trades. Models of the assigned drawings will be made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn.

Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced, and dimensioning and sectioning of oblique and axonometric pictorials will be done.

MAT 31124 Applied Mathematics 1 33

A follow-up to fundamentals of math with emphasis on machine shop applications. Include simple geometric and trigonometric solutions with the use of charts, tables, and other applicable devices. Designed to equip shop employees with a working knowledge of shop math without an in-depth study of math theory.

THIRD QUARTER

DFT 31131 Drafting III 2 66

An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods fastening materials, and fasteners; keys, rivers, springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with study of basic mechanisms of motion transfer; gears, cams, calculating dimensions will be studied. Drawings will be made involving these mechanisms.

FOURTH QUARTER

DFT 31132 Drafting IV 2 66

Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool, jig, fixture or simple machine and learn principles of design, handbook and manual usage.

WELDING

EVENING CERTIFICATE PROGRAM

Course Title	Nights Per Week	Contact Hours
FIRST QUARTER		
WLD 1120 Oxyacetylene (Welding & Cutting)	2	66
SECOND QUARTER		
WLD 1121 Arc Welding	2	66

THIRD QUARTER

WLD	1123	Inert Gas Welding	2	66

FOURTH QUARTER

WLD	1124	Pipe Welding	2	66
DFT	1117	Blueprint Reading: Welding	2	66

FIFTH QUARTER

WLD	1112	Mechanical Testing & Inspection	2	66

SIXTH QUARTER

WLD	1125	Certification Practices	2	66
TOTAL Hours Required				462

COURSE DESCRIPTIONS

WLD 1112 Mechanical Testing and Inspection

The standard method for mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which will give adequate information as to the quality of the weld. Types of tests to be covered are: bend, destructive, free-bend, guide-bend, nick-tear, notched-bend, tee-bend, nondestructive, V-notch, Charpy impact, etc.

DFT 1117 Blueprint Reading: Welding

A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specification.

WLD 1120 Oxyacetylene Welding and Cutting

Introduction to the history of oxyacetylene welding, the principles of welding and cutting nomenclature of the equipment, assembly of units. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

Prerequisite: None

WLD 1121 Arc Welding

The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course in the use of tools and equipment.

Prerequisite: None

WLD 1123 Inert Gas Welding

Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding.

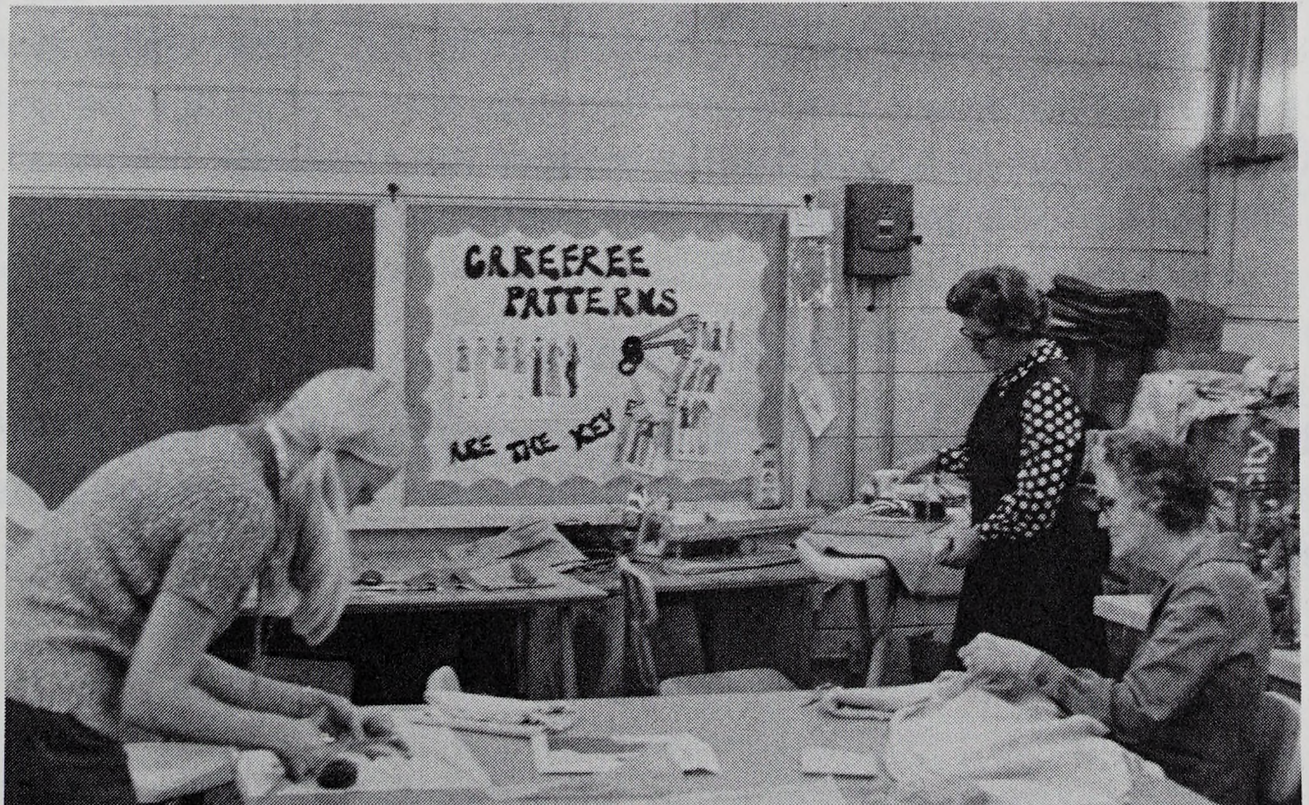
WLD 1124 Pipe Welding

Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.

WLD 1125 Certification Practices

This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds.

Adult Education and Extension Programs



ADULT EDUCATION AND EXTENSION PROGRAMS

GENERAL INFORMATION

Nash Technical Institute provides general education opportunities for the adults of Nash County. Adults interested in preparing for a skilled occupation are referred to the vocational and technical programs section of this catalog. Other adults interested in upgrading courses, skill improvement, high school completion, or personal interest courses will find such programs explained on the following pages. Additional information concerning the programs in this section may be obtained by contacting the Director of Adult and Extension Programs, Nash Technical Institute.

A variety of occupational upgrading and general interest courses are offered through the Institute's evening program. Classes are determined by the number of requests received from interested adults and industrial or service organizations and are conducted on the campus as well as at other locations throughout the county.

New classes may be established in any community upon request by interested groups of 12 or more persons.

ADMISSION

Any adult living within commuting distance of the Institute is eligible to attend adult education classes offered by the Institute on campus, or at any of the several adult education centers in the surrounding areas. Any student admitted to class must have reached his 18th birthday, and his regular school class must have graduated.

FEES

A $2.00 fee is charged for all extension education classes. All fees, when charged, are due and payable before the first class session. Books and supplies are available through the Institute's bookstore. When classes meet at a community center, the Institute makes it possible for books to be purchased at the community center.

ATTENDANCE

Adults are expected to attend class regularly. Attendance records are maintained by the instructor. Eighty per cent attendance is required of those receiving certificates.

EXTENSION CERTIFICATE PROGRAMS

Nash Technical Institute provides the opportunity to complete a certificate program in the evening. The two areas available are Hotel- Motel Management, and Management Development Program.

The Hotel-Motel Management program is designed to train personnel for the tourist industry. Through a structured program, an individual will be well trained for entry-level positions in the Hotel-Motel industry.

The Management Development Program is designed to train first-line supervisors to meet their role in middle management.

Hotel-Motel Management Certificate—Evening Program

			Nights Per Week	Contact Hours
FIRST QUARTER				
		Hotel-Motel Management	2	66
HOS	3018	Introduction to Hotel-Motel Management		
HOS	3022	Motel-Motor Hotel		
HOS	3016	Hotel-Motel Law		
SECOND QUARTER				
		Personnel Management	2	66
HOS	3028	Supervisory Development		
HOS	3017	Human Relations		
HOS	3002	Communications		
THIRD QUARTER				
		Property Management	2	66
HOS	3029	Supervisory Housekeeping		
HOS	3020	Maintenance and Engineering		
HOS	3014	Organization and Administration		
		Required for Completion		198

Hotel-Motel Management Certificate—Evening Program

			Nights Per Week	Contact Hours
FIRST QUARTER				
HOS	**3018**	**Introduction to Hotel-Motel Management**	2	66

The subject matter traces the growth and development of the lodging industry from early inns to modern skyscraper hotels and highways motels. This course offers the beginner basic information on the lodging industry; its size and scope; the nature and scope of the market it serves; types of establishments it includes; how hotels and motels are organized; purposes and functions of each department. Also stressed are the importance of the "hospitality attitude" and the role of the hotel/motel as a competitive business in the free enterprise system. The challenging career opportunities offered by the hotel-motel business are examined in this course, which also points up recent trends, including the growth of chain operation and the influence of motels.

HOS 3022 Motel-Motor Hotel Management

A single unit of study for operators of smaller properties, which is designed to provide a thorough understanding of the many administrative techniques required to manage today's motel. Emphasis will be placed on these four areas of activity: customers, employees, building and equipment finances. The course also deals with financial consideration, space utilization, sales promotion, guest relations, guest room facilities, food and beverage facilities, accounting records, interpreting financial statements and administrating controls.

HOS 3016 Hotel-Motel Law

The course presents a highly technical subject in non-technical language. It is directed to all innkeepers and their executive personnel. Its purposes are to illustrate the consequences of lack of foresight on the part of management, to help the student to understand the attitudes of the courts when an innkeeper is involved in a litigation, and to create an awareness of the many responsibilities which the law imposes upon the innkeeper. The course also offers those who make, or interpret, managerial decisions safe and sound rules to assist them in avoiding lawsuits and legal pitfalls.

SECOND QUARTER

Personnel Management	2	66

HOS 3028 Supervisory Development

The objective of this course is to develop the supervisory ability of department heads and other supervisors. More specifically it seeks to provide information, tools and techniques through which you may develop more management-minded, customer-oriented, cost-conscious department heads; make more effective use of available manpower; foster a sense of belonging among department heads and employees. To achieve these goals the course deals with four major areas of the department head's job: 1. Dealing with people. 2. Communications. 3. Training, techniques. 4. Cost consciousness and methods improvement.

HOS 3017 Human Relations

A course offering a basic knowledge of human behavior and suggestions of possible ways to channel that behavior so as to achieve worthwhile purposes. It provides some useful techniques for: understanding of guests in situations involving both normal behavior; minimizing correction points in getting work done smoothly and efficiently; maximizing individual iniative and its contributions to serving the guest. Case studies are used to illustrate principles of business psychology and the many ways in which employees and guests react to each other. Improved employee cooperation and guest relations are stressed.

HOS 3002 Communications

A study of the principles of communication, examining oral and written communication and explaining how to get your message accepted. Special emphasis and attention will be given to: the theory of communication; application of communication principles to basic management functions; effective listening; improving reading ability; developing speaking skill; communicating on the job; writing better letters, audio-visual communication techniques.

THIRD QUARTER

Property Management 2 66

HOS 3029 Supervisory Housekeeping

This course provides an introduction to the fundamentals of housekeeping management. Produced in cooperation with National Executive Housekeeping Association, it stresses employee training, record keeping and executive responsibilities. The course examines in detail the organization of the housekeeping department, its relationship to other departments, essentials of leadership and supervision and ways to set and achieve objectives through planning, implementation, staffing and scheduling. Also discussed are staff development, work methods, improvement, equipment, cleaning materials and cleaning procedures, room design and safety.

HOS 3020 Maintenance and Engineering

This course examines the organization of the Engineering Department and provides the technical information needed to establish effective preventive maintenance procedures. Completing this course will not make you a maintenance expert, but it will give you the ability to diagnose many common mechanical problems, and take the proper steps to correct them. This course deals with electrical systems and acoustics, plumbing, heating, ventilation, refrigeration and air-conditioners, and elevators. It also covers selection of the decorating with paint, structural maintenance, landscaping and contracts, fire prevention and protection, and kitchen equipment. A special section of the course is devoted to "Problems in Food Service Engineering."

HOS 3014 Organization and Administration

This course analyzes managements' functions and responsibilities in the lodging industry. The course traces the transformation of the traditional hotel into a modern business enterprise; evaluates the benefits of professional management; explains the use of organization in achieving owners' goals. It also describes modern business communication techniques and discusses the growing influence of accounting in hotel/motel management. Other topics covered includes personnel management, guidelines for management self-appraisal, management's role in bringing the hotel/motel (product) and the guest (market) together. Suggests planning and innovations aimed at solving the lodging industry's major problems.

MANAGEMENT DEVELOPMENT PROGRAM—EVENING PROGRAM

			Nights Per Week	Contact Hours
FALL QUARTER				
SDT	3018	Principles of Supervision	2	45
WINTER QUARTER				
		Psychology of Supervision	2	45
MDP	3019	Science of Human Relations		
MDP	3014	Job Relations Training		
MDP	3004	Creative Thinking		
SECOND QUARTER				
		Supervisory Techniques	2	45
MDP	3012	Job Analysis Training		
MDP	3013	Job Methods		
MDP	3008	Effective Writing		
SUMMER QUARTER				
		Motivation Techniques	2	45
MDP	3001	Art of Motivating People		
MDP	3006	Effective Communication		
Total Required for Completion				180

Management Development Program—Evening Program

			Nights Per Week	Contact Hours
FALL QUARTER				
MDP	**3018**	**Principles of Supervision**	2	45

This course presents basic and general principles of effective supervisory techniques. The course is divided into seven (7) parts which includes: Fundamentals of Supervision, Relationship on the Job, Communications, How to Train Employees, Performance and Job Evaluation, Job Management, and Work Improvement. This course may be taken in its entirety or individual parts.

WINTER QUARTER				
		Psychology of Supervision	2	45
MDP	**3019**	**Science of Human Relation**		

This topic is designed to relate the development of the Science of Humanics. Emphasis is given to the following areas: Machines and the following areas: Machines and the Human Elements, The Personal Needs that Stimulate Behavior, Leadership and Supervision, Factors Influencing Attitudes, The Foundation of Business, Employer-Employee Relations, and Techniques for Handling People. Several case studies are reviewed and discussed at length.

MDP 3014 Job Relation Training

This topic is concerned with the fundamentals of Human Relations. It is, perhaps, the most popular and meaningful of all MDP courses. The topic content is divded nto five (5) distinct sections which include: The Foundation of Human Relations, Bases for Decisions, The Four-Step Problem Solving Methods, Taking Prevention Action, Importance of Getting the Facts.

MDP 3004 Creative Thinking

The topic is to improve attitudes and thinking abilities of supervisors, to develop a strong motivation to utilize one's creatve potential; also to develop a greater curiosity in problem solving, and to gain open-mindedness toward ideas of others.

SPRING QUARTER

Supervisory Techniques 2 45

MDP 3012 Job Analysis

This topic is designed to familiarize the supervisor with techniques necesary to gather facts about the specific operations and responsibilities of the job and what it entails, these include such areas as mental ability, skill, and physical requirements.

MDP 3013 Job Methods

Emphasis on this topic is placed on the importance of finding more efficient ways of completing daily tasks. Each participant is given an opportunity to study and submit a proposed method improvement project.

MDP 3008 Effective Writing

This topic is designed to help supervisors improve their writing skills involving reports, letters, and memoranda which are necessary in daily operation. Fundamentals of sentence structure and elements of clear, concise, and correct writing will be emphasized.

SUMMER QUARTER

Motivation Techniques 2 45

MDP 3001 Art of Motivating People

This topic is designed to show the importance of properly motivated employees in relation to production. Emphasis is placed on specific problems in the area of motivation. A further value derived from this course is to provide self-evaluation for those responsible for motivating others.

ADULT BASIC EDUCATION (Grades 1-8)

Adult Basic Education is a program designed with two major purposes: (1) to assist adults who wish to improve their skills in oral and written communication, arithmetic, basic science, and social studies, and (2) to prepare adults for better family living, for job opportunities, for promotion in present employment, for civic and community leadership, and for self-realization. Classes meet two nights weekly in the local communities where there is a sufficient number of interested adults.

No registration fee is required and materials are provided by the Institute. All materials used have been especially prepared with emphasis on individual needs and interests.

Classes are organized in the following groups:

GROUP I

The basic fundamentals of reading, writing, and arithmetic are stressed in Group I. The course is designed to bring adults to a functional level whereby individual study is possible. Some basic science and social studies are introduced at this level.

GROUP II

Additional development of the fundamental skills is stressed. The student learns to work individually and independently. Science and social studies are included in the curriculum at this level.

GROUP III

Group III is a continuation of the second level with more individual study and a greater scope of subject matter. With the completion of Group III, the adult should be equipped to go into the Adult High School program.

PUBLIC SERVICE PROGRAMS

HOSPITALITY AND TOURISM EDUCATION

The hospitality industry, the third largest industry in North Carolina affords many employment opportunities to the people of this state. Hospitality training programs are available through the Institute. Training is provided for personnel in the motel, restaurant, service station, hospital, and retail businesses. Some of the subject areas covered are:

Food and Beverage Management and Service
Food and Beverage Purchasing
Food and Beverage Controls
Maintenance and Engineering
Supervisory Housekeeping
Service Station Attendant Training
Waiter-Waitress Training
Housekeeping Training
Human Relations
Communications
Sales Promotion
Hotel-Motel Law
Economics
Accounting
Front Office Procedure

FIRE SERVICE TRAINING

The growing Coastal Plain area of North Carolina requires expansion of fire fighting units and continuous up-grading of fire fighting personnel. Courses to train fire service personnel in the latest techniques and methods of fire fighting are provided through the Extension Division of the Institute. The Fire Service Training program provides training sessions in local departments. This allows the men to be trained as an organized group utilizing equipment that would ordinarily be used in controlling fires.

Fire Service classes include the following areas of study:

Portable Fire Extinguishers
Salvage and Overhaul Practices
Fire Apparatus Practices
Fire Steam Practices
Protective Breathing Equipment
Firefighting Procedures
Forcible Entry
Rope Practices
Ladder Practices
Ventilation
Rescue Practices
Industrial Fire Brigade

CULTURAL ENRICHMENT PROGRAMS

The cultural, creative and general interest courses offered by the Institute enables the adult to further develop an area of his interests.

Courses offered vary each quarter according to interest and demand. The courses listed are some that have been taught in the past and some we plan to offer in the immediate future. Others may be offered upon request.

Some of the study areas especially designed for the adults are:

Creative Art
Home Decoration
Health Education
Family Life
Parent Education
Consumer Education
Investments
Family Finance

BUSINESS AND INDUSTRIAL SERVICE PROGRAMS

SUPERVISORY DEVELOPMENT TRAINING

The Supervisory Development program has been designed to provide instruction for supervisors at various levels of management to prepare them for advancement.

Classes available to supervisory personnel are:

Principles of Supervision
Economics in Business and Industry
Art of Motivating People
Effective Communications
Industrial Safety and Accident Prevention
The Supervisor in North Carolina
Cost Accounting for Supervisors
Instructor Training
Supervision in Hospitals
Conference Leadership
Human Relations
Effective Writing
Effective Speaking
Reading Improvement
Work Measurement
Job Methods
Creative Thinking
Industrial First-Aid
Job Analysis Training

NEW INDUSTRY TRAINING

The creation of more jobs and better paying jobs in North Carolina by promoting the expansion of existing industries and by attracting new industries to the state was a major consideration in the original establishment of the industrial education centers. The Department of Community Colleges, working with the local institution, will develop and fund legitimate training programs, tailor-made for each industry, to meet the immediate trained manpower needs when the plant, new or expanded, is ready to go into production. In the process of doing this, we will help the plant management develop a long-range training program of its own to meet those replacement and retaining needs that industry should and can be prepared to do for itself.

VOCATIONAL INSERVICE EDUCATION

The Vocational Extension classes conducted by Nash Technical Institute are developed to fit the needs of industry and business and to provide training desired by employed individuals of the area. Because of the flexibility of these programs, courses are tailored to specific group needs. New programs are initiated as the need is indicated by surveys, interviews, and sufficient enrollment in individual classes. Some examples of courses offered are:

Blueprint Reading for all trades
Basic Electricity
Electronics
Welding
Brick Masonry
Refrigeration & Air-Conditioning
Plumbing
Electrical Wiring
Industrial Sewing
Mathematics

In-plant programs are designed to improve and enhance employee skills. Industry is invited to discuss their needs with the Director of Adult and Extension Programs.

VOCATIONAL EXTENSION COURSES

Nash Technical Institute offers, in addition to its other programs, a variety of vocational extension courses through its evening program at the Institute and at various facilities throughout the country. These courses afforded the opportunity for up-grading, up-dating, and pre-employment in training.

Instruction is offered in the following areas:

- Carpentry
- Brick Masonry
- Nurse's Assistant
- Professional Housekeeping
- Ambulance-Attendant training
- Commercial Cooking
- Industrial Sewing
- Farm Tractor Mechanics
- Blueprint Reading
- Waiter-Waitress training
- Small Engine Repair
- Furniture Upholstery

PROFESSIONAL INSERVICE PROGRAMS

Professional Inservice Programs include courses in Business Education and Teacher Education. Courses are offered at the professional and subprofessional levels.

BUSINESS EDUCATION

Courses in Business Education are planned especially for adults who desire business education for personal or job-related purposes. Among the courses provided by the institute are the following:

- Beginning Typing
- Business English
- Shorthand
- Bookkeeping
- Business Correspondence
- Business Math
- Business Machines
- Accounting I and II

TEACHER EDUCATION

Teachers are increasingly seeking opportunities for professional growth through inservice education. The Institute cooperates with local school agencies, senior colleges, and the universities in providing short courses, workshops, and courses for certificate renewal and professional growth. One of the most popular courses has been the Aerospace Workshop.

MANPOWER DEVELOPMENT PROGRAM

Nash Technical Institute offers an eight-week job training course for individuals seeking employment in the Nash County area. Course work emphasizes job-related basic education and a curriculum designed to help trainees better understand the rewards and responsibilities of industrial job holding. Trainees also have the benefit of intensive personal counseling and job development.

The project's aim is to put people to work. So graduation can come at any time when jobs are available for trainees who prove themselves "job ready". Trainees are also introduced to skill training or academic opportunities available through the community college and through other manpower programs.

LEARNING LABORATORY

The Learning Laboratory provides the opportunity for a person at any educational level to continue his education. The laboratory is a highly individualized approach to learning in that all materials are self-instructional and each student's course of study is designed to meet his particular needs. Each student plans his study schedule to fit his personal schedule.

Study in the learning lab may lead to the completion of the High School Equivalency Certificate or the Adult High School Diploma; it may upgrade background knowledge for college or technical/vocational curricula; it may provide a source of learning for general interest or personal satisfaction for the individual.

The learning lab is open, without charge, to any person eighteen years of age or older who wishes to improve his academic background. It is open Monday through Friday from 8:00 a.m. to 4:00 p.m., and Monday through Thursday from 8:00 a.m. 4:00 p.m.

HIGH SCHOOL EQUIVALENCY TESTS

Nash Technical Institute has been designated an official testing center for the General Educational Development Tests by the American Council on Education. The State Department of Public Instruction will issue a "Certificate of High School Equivalency" to adult residents who have not completed high school provided they meet the following requirements:

1. Make a standard score of 35 or above on each of the five tests and an average standard score of 45 on all 5 tests.

2. Be nineteen years of age or older (an 18 year old may take the test provided he has been out of the public schools for 6 months).
3. Make application for tests on official application blanks that are available at Nash Technical Institute and in the offices of the City and County Superintendents of Schools.

The GED tests will be given at the Institute by appointment. It is recommended that those wishing to take the GED come by the institute for counseling before attempting the test. There is no charge for the test.

Training for high school completion is available at the Institute.

COMMUNITY SERVICE PROGRAMS

Nash Technical Institute plans to sponor and promote a number of community services which contribute to the culture, economic, and civic improvement of the community. Such services may arise from almost every program area. Community service activities include the following:

Seminars and Conferences
Speakers and Forum Series
Discussion Groups
Fine Arts Exhibts
Musical Programs
Community Studies

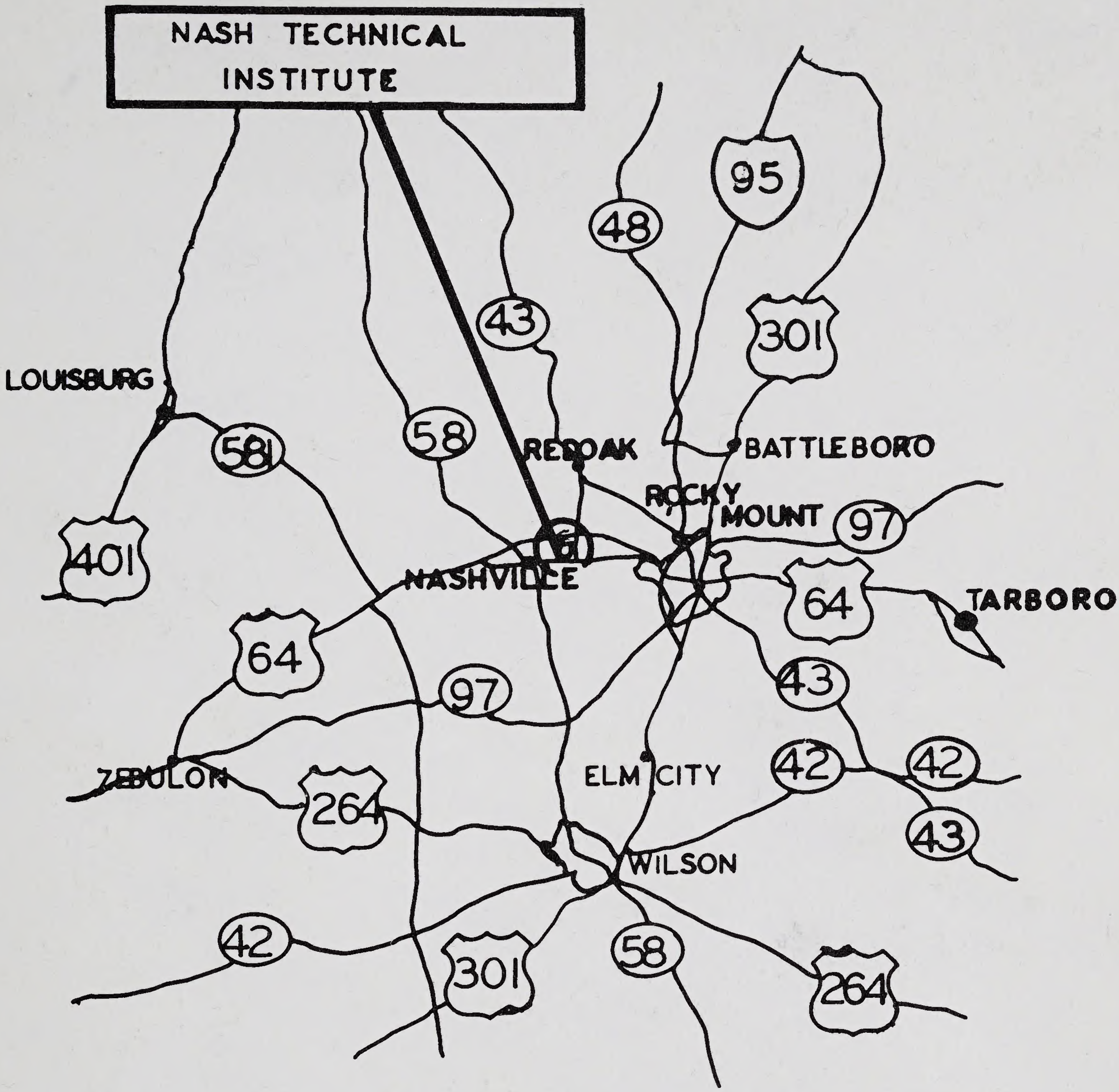
ADULT HIGH SCHOOL COURSES

The Adult High School Diploma Program is designed for adults, 18 years of age or older, who have not finished their high school education. Adults are afforded the opportunity to earn their high school diploma through a teacher-instructed, or programmed-instruction accelerated program of studies. This program is conducted in cooperation with local boards of education and is approved by the North Carolina State Board of Education.

The program is organized on two levels which include the following courses.

Level I (9-10) grade level)	Level II (11-12 grade level)
English	English
Mathematics	Algebra
U. S. Government	U. S. History
Life Science	Physical Science

Adult students are given placement tests prior to their enrollment in the program to determine the appropriate grade level in which they should begin. Students are required to pass each course from the point at which they began through the 12th grade level. Upon successful completion of the required courses, a standardized final achievement test is given to determine eligibility for the adult high school diploma. This diploma is awarded by the local Boards of Education. There is a $2.00 registration fee for this program.



Location of Nash Technical Institute

The provisions of this publication are not to be regarded as an irrevocable contract between the student and Nash Technical Institute. The Institute reserves the right to change any provision or requirement at any time within the student's term of residence, or to add or withdraw course offerings. The Institute further reserves the right, at any time, to request a student to withdraw when it considers the action to be in the best interest of the institution.